

# ALPHA BRIDGE LAYER 2 Access Switch (AS200/12/XFS)



Supports Max. 2GE TX  
Ports and 10 10G SFP+  
Uplink Ports.



Advanced Hardware  
Architecture and Industry-  
leading Port Density.



Carrier-Grade, High  
Reliability, Layer-3  
Routing Functions.



Verified Service  
characteristics, Versatile  
IPv6 solution, Complete  
Security Mechanism

## Product Overview

AS200/12/XFS L2 Series is a next-generation aggregation 10GE switch introduced by alpha bridge technologies. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet café and diskless working environment. It is developed on the basis of high-performance hardware and ABROS software platform with alpha bridge technologies own independent intellectual property rights. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ether- ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

## Product Characteristics

### Innovative Virtual Cluster Switching Technique

Innovative VSS (Virtual Switch System): AS200/12/XFS L2 Series virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones. Improved Performance: VSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent. High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, AS200/12/XFS L2 Series can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure. Easy Management: VSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

## Product Characteristics

### Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and their protection shift time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

### Telecom-Level Ethernet Switch

Supports the telecom-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP/ MSTP, backup of active and standby uplinks and LACP link aggregation to cater to the requirements of high reliability of carriers.

Support Ethernet standard 802.3u, 802.3x, 802.3ad, 802.1d, 802.1p, 802.1q, 802.1w, 802.1ad.

Support system status LED, port dynamic LED.

Provides the perfect Ethernet OAM mechanism to monitor the network running status in real time for rapid trouble locating and detection.

Supports powerful ACL functions to access and control L2- L7 data based on physical port, VLAN, MAC, IP and protocol port ID, and providing carriers flexible and various policy control methods.

Supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade.

Supports various L2 multicast functions, including IGMP-Snooping, fast-leave and trans-vlan multicast copy.

### Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc.

Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient.

Supports TFTP-patterned file upload/download management.

Supports ISSU (In-Service Software Upgrade).

Supports SNMP and NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

### Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services.

Supports provides flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services.

Supports 8 priority queues by each port.

Supports multiple queue schedule algorithms such as SP, WRR, and SP+WRR.

### Versatile IPv6 Solutions

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc.

Supports Ping, Traceroute, Telnet, SSH, ACL and so like on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements.

### Perfect Security Mechanisms

Equipment-level security: The advanced hardware infrastructure design realizes the level based packed 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.

Supports perfect security authentication mechanisms: IEEE802.1xRadius and Tacacst.

Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions.

Supports a perfect ring detection mechanism to ensure the long-term stable running of network. supports port isolation within the same VLANDHCP-Snooping and IP plus MAC plus Port binding for ensuring user data security.

## Product Specifications

Item		AS200/12/XFS
Gigabit RJ45		2
10G/GE SFP+		10
Console (RJ45)		1
Backplane (Gbps)		240
Forwarding rate (Mpps with 64 bytes)		153
Dimension mm (WxDxH)		280x180x44
Weight (KG)(empty)		1.3
Power consumption	No-load	<14W
	Full-load	35W
Package	Dimension mm (WxDxH)	350x268x94
	Weight (KG)(empty)	2.0
Total output BTU (1000BTU/H=293W)		153.58
Fan Number		2
Power supply		45W
Noise@25°C (dBA)		45
MTBF(H)		>200,000
Forwarding mode		Store-forward
Flash (MB)		16
DRAM (MB)		512
MAC		32K
Buffer size (MB)		2
Interface vlan		1023
Routing table		12K
Jumbo frame		9K

## Product Features

VLAN	QoS	Reliability
<ul style="list-style-type: none"> <li>4K Active VLAN, QinQ &amp; Selective QinQ, GVRP, Private VLAN, Voice VLAN</li> </ul>	<ul style="list-style-type: none"> <li>CAR, HQoS, MAC/IP/TCP/UDP/</li> <li>VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED,</li> <li>flow monitoring and traffic shaping</li> </ul>	<ul style="list-style-type: none"> <li>Static/LACP link aggregation, Interface backup</li> <li>EAPS and ERPS</li> <li>ISSU uninterrupted system upgrade</li> <li>BVSS, ups to 16-units per stack</li> <li>VRPP, UDLD</li> </ul>
Spanning Tree	Security	Accessories
<ul style="list-style-type: none"> <li>802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)</li> <li>BPDU guard, root guard and loopback guard</li> </ul>	<ul style="list-style-type: none"> <li>Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky</li> <li>DHCP Snooping and option 82,</li> <li>DAI &amp; IP source guard, PPPoE+,</li> <li>IEEE 802.1x, Radius and TACACS+</li> <li>L2/L3/L4 ACL flow identification and filtration</li> <li>Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc. Broadcast/multicast/unknown unicast storm-control</li> <li>MD5, SHA-256, RSA-1024, AES256, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Power cord, rackmount kits, console cable</li> </ul>
		Certification
		<ul style="list-style-type: none"> <li>CE, ROHS</li> </ul>
IP	DHCP	Multicast
<ul style="list-style-type: none"> <li>Static route, RIPv1/v2, OSPFv2</li> <li>BGP(2T10X/8TG4X)</li> <li>IPv4/v6 dual stack</li> <li>ECMP</li> </ul>	<ul style="list-style-type: none"> <li>DHCP server/relay/client</li> <li>DHCP snooping/option82</li> </ul>	<ul style="list-style-type: none"> <li>IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter</li> <li>PIM-SM/SSM</li> </ul>
IPv6	Environment	Management
<ul style="list-style-type: none"> <li>ICMPv6, DHCPv6, ACLv6 and Ipv6 Telnet</li> <li>IPv6 neighbor discovery, Path MTU discovery</li> <li>MLD V1/2, MLD snooping</li> <li>IPv6 Static Routing, RIPv6, OSPFv3</li> <li>Manual tunnel, ISATAP tunnel, 6 to 4 tunnel</li> </ul>	<ul style="list-style-type: none"> <li>Operating temperature/ humidity: 0°C -50°C ,10%-90% non-condensing</li> <li>Storage temperature/humidity: -20°C -70°C, 5%-95%</li> <li>non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON</li> <li>TFTP, FTP, SFTP, NTP, ZTP, SPAN, RSPAN, Dying gasp, syslog</li> </ul>

## Ordering Information

Item	Description
AS200/12/XFS	2-Port Gigabit RJ45 + 10-Port 10GE SFP+ L2 Stackable Managed Switch (single AC-220V power supply; fanless, 1U, standard 19-inch rack-mounted installation)

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