ALPHA BRIDGE- LAYER 3 Switches (AS300/30/XT)

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

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

Advanced Hardware Architecture and Industry-leading Port Density.

Supports Max. 24 GE SFP
6 10GE/GE SFP+

Product Overview

AS300/30/XT Series is a new generation of aggregation 10G switches introduced by Alpha Bridge Technologies Private Limited. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed based on high-performance hardware and ABOS software platform with ABTPL's own independent intellectual property rights.

It supports multiple services like IPv6, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports non-stop upgrade, continuous forwarding, graceful restarting, and redundancy protection.

Innovative Virtual Cluster used in Switching Technique

AVSS (ABTPL Virtual Switch System):

AVSS 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

Improved Performance:

Virtualize multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.

High Reliability:

Based on the advanced distribution mechanism and efficient cross-physical link aggregation function, the logical control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer-3 routing forwarding, avoiding service interruption because of a single point of failure.

Easy Management:

AVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Product Characteristics

Varied Service Characteristics

Supports layer-2 and layer-3 multicast routing protocol, which enable the device to access IPTV, HD video surveillance and HD video conference. Supports layer-3 routing protocol and super-large routing table capacity, which enables the device is deployable in large campus networks, enterprise networks and industry networks.

Flexible & Convenient Management and Maintenance

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

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

Complete Security Mechanism

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. Security Authentication Mechanism: IEEE 802.1x, Radius and Tacacs + Enhanced Service Security Mechanism: supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filtering technology.

Industrial Ethernet Ring with “0” Delay/Packet Loss

Supports industry-level EAPS and ERPS with protection recovery time less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by multiple test scenarios.

Versatile IPv6 Solutions

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

Supports Ping, Traceroute, Telnet, SSH, ACL. Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc. Supports IPv6 tunnel, manual tunnel, automatic tunnel, GRE tunnel, 6to4, ISATAP. Supports IPv4 transits to IPv6, IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Carrier-Level QoS Policies

Alpha Bridge AS300X series supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority, eventually streamlining carrier’s services in a better way.

Alpha Bridge series provides flexible bandwidth control policies, supporting port/flow-based Low limit, ensuring the line speed forwarding of each port. Supports 8 priority queues by each port.

AS300X Series supports multiple queue schedule algorithms such as SP, WRR and “SP + WRR”.

Product Specifications

Item	AS300/30/XT
GE Interface (Ports)	24 GE TX
10 GE Interface (Ports)	6 10GE/GE SFP+
Console	1RJ45 Port
Backplane	216 Gbps
Forwarding rate	126 Mpps
Chassis Dimensions (WxDxH) (mm)	440x315x44
Package Dimensions (WxDxH mm)	576x448x94
Power supply AC: 100-240V (hot-swap) 50Hz±10%	75W
Total output BTU (1000 BTU/H = 293W)	255.97
Noise@25°C(dBA)	45
MTBF(H)	> 2,00,000
Forwarding mode	Store-forward
Flash (MB)	16
DRAM (MB)	512
MAC	32K
Buffer size (MB)	2
Interface VLAN	64
ARP table (IPv4)	12K
ARP table (IPv6)	2K
Routing table (IPv4)	12K
Routing table (IPv6)	6K
Jumbo frame	9K
Total SVI	1K

Product Features

VLAN	QoS	Reliability
4K Active VLAN, Q-in-Q & Selective Q-in-Q, GVRP, Voice VLAN	MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, CAR, HQoS, 802.1P/DSCP priority relabeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring, and traffic shaping	Static/LACP link Aggregation, Interface backup, EAPS and ERPS, ISSU uninterrupted system upgrade, BVSS virtual stacking, URPF, LLDP, VRRP, 1+1 power backup
Spanning Tree	**Security**	**Accessories**
802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP) BPDU guard, root guard, and Loopback guard	Port isolation, Port security, & "IP+MAC+port" binding, MAC sticky, DAI & IP source guard, PPPoE+ IEEE 802.1x, Radius and Tacacs+ L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc. Broadcast/multicast/unknown unicast storm-control MD5, SHA-256, RSA-1024, AES256, etc.	Power cord, rackmount kits, console cable
MPLS		**Certification**
Multi-VRF		CE, RoHS
IPv4	**DHCP**	**Multicast**
Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP, BFD for OSPF, BGP	DHCP server/relay/client, DHCP snooping, option82	PIM-SM, PIM-DM, IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter
IPv6	**Environment**	**Management**
ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet, IPv6 neighbor discovery, Path MTU discovery, MLD V1, MLD snooping, IPv6 Static Routing, RIPng, OSPFv3, Manual tunnel, ISATAP tunnel, 6 to 4 tunnels	Operating temperature/humidity: 0°C to 50°C, 10%-90% non-condensing Storage temperature/humidity: (-20°C to 70°C), 5%- 95% non-condensing	Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON, TFTP, FTP, SFTP, NTP, SPAN, RSPAN, sFlow

Ordering Information

Item	Description
AS300/30/XT	Ethernet routing switch with 24 GE and 6 10GE ports (1 RJ45 console port, 24 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)