

S5300-24T6X

Stackable L3 1/10G Switch for Aggregation to Large-Scaled Networks



I. Product Overview

S5300-24T6X is a new generation of aggregation 1/10G switch. It is targeted at the IP MAN (metropolitan Area network), campus networks and enterprise networks. It is developed on the basis of high-performance hardware and BDROS software platform with 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.

II. Innovative Virtual Cluster Switching Technique

Stackable BVSS (Virtual Switch System)

- ◆ BVSS 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 link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.



Easy Management

- ◆ BVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

III. Product Characteristics

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 flexible bandwidth control policies and supports port-/flowbased 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.

Varied Service Characteristics

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

Versatile IPv6 Solution

- ◆ Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, 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.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

- ◆ Supports industry-level EAPS and ERPS, and their protection recovery 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.

Complete Security Mechanism

- ◆ Equipment-Level Security: The advanced hardware infrastructure design realizes the level-based packet



schedule and packet protection, prevents DoS-/TCPrelated 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 BDTacacs+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.

Innovative Energy-Saving Design

- ◆ Intelligent power management: The power system supports real-time monitoring the device and the slow-start. It is also power-saving. Intelligent fan management system: The fan system supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise. Complies with the international standard IEEE 802.3a.

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.

IV. Product Specifications

Item	S5300-24T6X
Interface	24x 10/100/1000BASE-T RJ45 ports 6x 10GE/GE SFP+ uplink ports
Console	1x RJ45 Port
Switching capacity	168 Gbps
Forwarding rate	126 Mpps
Chassis Dimensions (HxWxD) (mm)	44x440x350
Package Dimensions (HxWxD) (mm)	94x576x448
Power supply	2 (1+1 Redundancy) hot-swap
Power supply AC: 100V-240V (hot-swap) 50Hz±10%	75W
Total output BTU (1000BTU/H=293W)	255.97
Fan number	2 (1+1 Redundancy)
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
Routing table IPv4	12278
Routing table Ipv6	4095
Total SVI	1K

V. Features

VLAN	<ul style="list-style-type: none"> ➤ 4K Active VLAN ➤ QinQ & Selective QinQ ➤ GVRP ➤ Voice-VLAN
Spanning Tree	<ul style="list-style-type: none"> ➤ 802.1D (STP), ➤ 802.1W (RSTP) and 802.1S (MSTP) BPDU guard ➤ root guard and loopback guard
Multicast	<ul style="list-style-type: none"> ➤ PIM-SM, PIM-DM, IGMP v1/v2/v3 ➤ IGMP Snooping, IGMP Fast Leave ➤ MVR, IGMP filter
IPv4	<ul style="list-style-type: none"> ➤ Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP ➤ BFD for OSPF, BGP
DHCP	<ul style="list-style-type: none"> ➤ DHCP server/relay/client ➤ DHCP snooping/option82g
MPLS	<ul style="list-style-type: none"> ➤ Multi-VRF
IPv6	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ CAR, HCoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping



Security	<ul style="list-style-type: none"> ➤ Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky, DAI & IP source guard ➤ IEEE 802.1x, Radius and BDTacacs+ ➤ 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
Reliability	<ul style="list-style-type: none"> ➤ Static/LACP link aggregation, Interface backup ➤ BVSS virtual-stacking ➤ EAPS and ERPS ➤ URPF, LLDP ➤ ISSU ➤ VRRP ➤ 1+1 power backup
Management	<ul style="list-style-type: none"> ➤ Console, Telnet, SSH v1/2, HTTP, HTTPS ➤ SNMP v1/v2/v3, RMON ➤ TFTP, FTP, SFTP ➤ NTP, SPAN, RSPAN ➤ sFlow
Accessories	<ul style="list-style-type: none"> ➤ Power cord, rackmount kits, console cable
Environment	<ul style="list-style-type: none"> ➤ Operating temperature/humidity: 0℃ -50℃ ,10%-90% non condensing ➤ Storage temperature/humidity: -20℃ -70℃ , 5%-95% non-condensing
Certification	<ul style="list-style-type: none"> ➤ CE, FCC, ROHS

Feature	S5300-24T6X
Stackability	8
MAC address Capacity	32766
Jumbo frame	9K
ARP Capacity	8191
NDP Capacity	2048
VLAN IDs	4K
MSTP Instance Num	32
QoS ipv4 flow entry	ifp: 2303 efp: 768
QoS ipv6 flow entry	ifp: 1088 efp: 768
IPv4 ACL	ifp: 2303 efp: 768
IPv6 ACL	ifp: 1088



	efp: 768
FIBv4	8191
FIBv6	2048
Multicast Routing Table (IPv4)	6k
Multicast Routing Table (IPv6)	×
Maximum VRRP Group Num	255
Maximum MLAG Group Num	×
VXLAN tunnel	×

VI. Odering Information

Item	Description
S5300-24T6X	Ethernet routing switch with 24x GE and 6x 10GE ports (1x RJ45 console port, 24x 10/100/1000BASE-T RJ45 ports, 6x 10GE/GE SFP+ uplink ports; 2x power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)

