



QSFPTEK S5300-16S8TS4X Stackable Gigabit Ethernet L2++ Switch Owner's Manual

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Product Overview



S5300-16S8TS4X is a next-generation access 1/10GE switch introduced by QSFPTEK . It is targeted at the IPMAN (metropolitan area network), government and enterprise networks, Internet café and disk-less working environment. It is developed on the basis of high performance hardware and BDROS software platform with QSFPTEK 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 BVSS Switch Stacking Technique

- Innovative Stackable BVSS (Virtual Switch System): S5300-16S8TS4X – virtualizes multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.
- Improved Performance: Switch stacking 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, S5300-16S8TS4X – can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.
- Easy Management : Switch stacking realizes single IP management, greatly improving the networking efficiency and lowering the operating cost..

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

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 QSFPTK 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 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.
- Supports perfect security authentication mechanisms: IEEE 802.1x, Radius and BDTacacs+. 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 VLAN, DHCP-Snooping, and IP plus MAC plus Port binding for ensuring

Product Specifications

Item	S5300-16S8TS4X
Interface	16x 100/1000M SFP ports 8x 1G RJ45/SFP Combo ports 4x 10GE/GE SFP+ uplink ports
Console	1
Switching capacity	128Gbps
Forwarding rate	96 Mpps
Chassis Dimensions(HxWxD)(mm)	44x440x280
Chassis Weight(KG)(empty)	4
Package Dimensions(HxWxD)(mm)	94x576x448
Package Weight(KG)	5.2
Power consumption no-load	<18W
Power consumption full-load	38W
Power supply AC: 100V-240V 50Hz±10%	1
Total output BTU (1000BTU/H=293W)	153.58
Fan number	2
Noise@25°C(dBA)	45
MTBF(H)	>200,000
Forwarding mode	Store-forward
Flash (MB)	16
DRAM (MB)	256
MAC	16K
Buffer size(MB)	2
Interface vlan	64
Routing table IPv4	512
Routing table Ipv6	129

Features

VLAN	<ul style="list-style-type: none"> • 4K Active VLAN • QinQ & Selective QinQ • VRP, Private VLAN • Voice VLAN
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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"> • IGMP v1/2/3 • IGMP Snooping • IGMP Fast Leave • IGMP Filter Ø MVR
IP	<ul style="list-style-type: none"> • Static route • RIP, OSPF • IP v4/v6 dual stack • DHCP Server/Client/Relay
QoS	<ul style="list-style-type: none"> • CAR, HQoS, 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 stickyDHCP Snooping and option 82, DAI& IP source guard
	<ul style="list-style-type: none"> • 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 • EAPS and ERPS Ø ISSU
Management	<ul style="list-style-type: none"> • Console,Telnet,SSH v1/2,HTTP,HTTPS SNMP v1/v2/v3, RMON Ø TFTP, FTP, SFTP Ø NTP Ø ZTP(Zero Touch Provisioning) • SPAN, RSPAN
DHCP	<ul style="list-style-type: none"> • DHCP server/relay/client • DHCP snooping/option82

Environment	<ul style="list-style-type: none"> • Operating temperature/humidity:-10°C-50°C, 10%-90% non-condensing • Storage temperature/humidity:-20°C-70°C, 5%-90% non-condensing
Certification	<ul style="list-style-type: none"> • CE, FCC,ROHS
Accessories	<ul style="list-style-type: none"> • Power cord, rackmount kits, console cable

Feature	S5300-16S8TS4X
Stackability	2
MAC address Capacity	16K
Jumbo frame	9K
ARP Capacity	2036
NDP Capacity	2040
VLAN IDs	4K
MSTP Instance Num	32
QoS ipv4 flow entry	1150(×egress)
QoS ipv6 flow entry	512
IPv4 ACL	1150(×egress)
IPv6 ACL	512
FIBv4	2036
FIBv6	2040
Multicast Routing Table IPv4)	×
Multicast Routing Table IPv6)	×
Maximum VRRP Group Num	255
Maximum MLAG Group Num	×

Ordering Information

Item	Description
S5300-16S8TS4X	Ethernet Layer-2++ switch with 24x GE and 4x 10GE ports (1x Console port, 16x 100 M/1000M SFP ports, 8x 1G RJ45/SFP Combo ports, 4x 10GE/GE SFP+ uplink ports; 100 to 240 VAC input, 60 HZ, the cooling fan, 1U,standard 19 inch rack-mounted installation)

Documents / Resources



[QSPTEK S5300-16S8TS4X Stackable Gigabit Ethernet L2++ Switch](#) [pdf] Owner's Manual
S5300-16S8TS4X Stackable Gigabit Ethernet L2 Switch, S5300-16S8TS4X, Stackable Gigabit Ethernet L2 Switch, Gigabit Ethernet L2 Switch, Ethernet L2 Switch, L2 Switch, Switch

References

- [QSPTEK - Compatible Optical Transceivers Factory Outlet](#)