



## QSFPTEK S5300-48T4X Stackable L2++ 1-10G Switch Owner's Manual

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### S5300-48T4X

**Stackable L2++ 1/10G Switch with OSPF, VRRP, DHCP for SMBs  
and Enterprises**



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## I. Product Overview

QSFPTek S5300-48T4X is a new-generation aggregation 1/10GE switch developed for carrier IP MAN and enterprise networks. Based on the new high-performance hardware and the BDROS platform, S5300-48T4X supports ACL, selective QinQ, 1:1 and N:1 VLAN switching, Ethernet OAM, carrier-level QoS, industry-level 10G Ethernet ring, etc.

## II. Product Characteristics

### Innovative BVSS Switch Stacking Technique

- Innovative Stackable BVSS (Virtual Switch System): S5300-48T4X 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, S5300-48T4X 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..

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

- Supports industrial Ethernet ring network protection protocol. The protection switching time is less than 50ms. The solution has been applied in power industry, rail transportation industry and military projects for decades. It can achieve zero packet loss.

### Carrier-class Ethernet Switches

- Supports carrier Ethernet ring network protection protocol. The protection switching time is less than 50ms. It also supports simple and effective redundancy protection mechanism such as STP/RSTP/MSTP protocol and dual uplink standby link protection and LACP link aggregation. These functions meet the requirement of carrier

grade high reliability.

- The solution has perfect Ethernet OAM, which can real time monitor the network operating state and rapidly detect and locate the malfunction.
- The solution supports strong ACL function. The solution supports L2~L7 data access and control based on the physical port, VLAN IDs, source MAC/IP addresses and protocol port, which provides flexible ways of policy control.
- Supports ISSU (In-Service Software Upgrade), guaranteeing the user data non-stop forwarding when the system is upgrading.
- Supports various L2 multicast function, including IGMP-Snooping, user fast-leave mechanism and cross VLAN multicast replication function.

### **Carrier QoS Policies**

- Supports complex traffic classification based on VLAN, source MAC/IP addresses, destination MAC/IP addresses, IP protocols, or priorities. It also supports priority remark. These functions provide an effective way for users to optimize their businesses.
- Provides flexible bandwidth control policies and support a port base or flow-based Committed Access Rate (CAR) and guarantees Layer 3 line-speed forwarding.
- Every port supports 8 priority queues.
- Supports multiple queue grooming algorithms such as SP, WRR or SP+WRR.

### **Comprehensive IPv6 Solutions**

- Comprehensively supports IPv6 Neighbor Discovery, ICMPv6Path MTU Discovery.
- Supports IPv6 based Ping, Traceroute, Telnet, SSH, ACL, meeting the need of IPv6 network equipment management and service control..

### **Comprehensive Security Mechanisms**

- Adopts advanced hardware architecture design, realizing the hierarchical scheduling and protection of the packet. It provides multiple security measures to defend against DOS or TCP attacks; and supports command line authority control based on user levels.
- Comprehensive Security Certification: Complies with IEEE 802.1x, Radius, BDTacacs+.
- Supports the suppression of broadcast, multicast and unknown unicast packet, ensuring the equipment can operate normally in harsh network conditions.
- Has the perfect loop detection mechanism.
- Supports the port isolation in a same VLAN and DHCP- Snooping IP +MAC + port binding.

### **Convenient Management and Maintenance**

- Supports multiple management styles such as Console, Telnet, SSH.
- Supports WEB based management. The management is simpler and more effective.
- Supports upload and download of TFTP files.
- Supports ISSU (In-Service Software Upgrade).

- Supports SNMP. By cooperating with Baud's smart "NMS", functions including the equipment auto-discovery, the topology management, the equipment configuration management, the performance data analysis, and the fault management can be realized. In this way, the network management is simplified and the user gets a new product experience.

### III. Product Specifications

Item	S5300-48T4X
Interface	48x 10/100/1000BASE-T RJ45 ports 4x 10GE/GE SFP+ uplink ports
Console	1
Switching capacity	176Gbps
Forwarding rate	132Mpps
Chassis Dimensions(HxWxD)(mm)	44x440x280
Chassis Weight(KG)(empty)	4.7
Package Dimensions(HxWxD)(mm)	94*576*448
Package Weight(KG)	5.6
Power consumption no-load	<45W
Power consumption full-load	<48W
Power supply AC: 100V-240V 50Hz±10%	1
Total output BTU (1000BTU/H=293W)	163.82
Fan number	2 (1+1 Redundancy)
Noise@25°C(dBA)	45
MTBF(H)	> 200,000
Forwarding mode	Store-forward
Flash (MB)	16MB
DRAM (MB)	256M
MAC	32K
Buffer size(MB)	2
Interface vlan	64
Routing table IPv4	512
Routing table Ipv6	152

### IV. Features

<b>VLAN</b>	<ul style="list-style-type: none"> <li>➤ 4K VLAN entries</li> <li>➤ GVRP</li> <li>➤ 1:1 and N:1 VLAN Mapping</li> <li>➤ QinQ and selective QinQ</li> <li>➤ Private VLAN</li> <li>➤ Voice-VLAN</li> </ul>
<b>STP</b>	<ul style="list-style-type: none"> <li>➤ 802.1d STP, 802.1w RSTP, 802.1s MSTP</li> <li>➤ BPDU protection, root protection and ring protection</li> </ul>
<b>Multicast</b>	<ul style="list-style-type: none"> <li>➤ IGMP v1/2/3</li> <li>➤ IGMP Snooping</li> <li>➤ IGMP Fast Leave</li> <li>➤ multicast group policy and multicast number limit</li> <li>➤ MVR</li> </ul>
<b>IPv4</b>	<ul style="list-style-type: none"> <li>➤ Static routing, RIP, OSPF, VRRP</li> </ul>
<b>IPv6</b>	<ul style="list-style-type: none"> <li>➤ ICMPv6, DHCPv6, ACLv6, IPv6 Telnet</li> <li>➤ IPv6 Neighbor Discovery</li> <li>➤ Path MTU Discovery</li> <li>➤ MLD Snooping</li> </ul>

<b>DHCP</b>	<ul style="list-style-type: none"> <li>➤ DHCP server, client, relay, snooping</li> </ul>
<b>Qos</b>	<ul style="list-style-type: none"> <li>➤ Traffic classification of L2~4 protocol headers</li> <li>➤ CAR traffic control</li> <li>➤ 802.1P/DSCP priority remark</li> <li>➤ Multiple queuing algorithms such as SP, WRR or SP+WRR</li> <li>➤ Tail-Drop, WRED</li> <li>➤ Traffic supervision and traffic shaping</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>➤ Identification and filtering of L2/L3/L4 based ACL</li> <li>➤ Defend against DOS or TCP attacks</li> <li>➤ Suppression of broadcast, multicast and unknown unicast packet.</li> <li>➤ Port isolation</li> <li>➤ Port Security, IP+MAC+port binding</li> <li>➤ DHCP Snooping, DHCP Option 82</li> <li>➤ IEEE 802.1x certification</li> <li>➤ Radius, TACACS+</li> <li>➤ Command line authority control based on user levels</li> </ul>
<b>Reliability</b>	<ul style="list-style-type: none"> <li>➤ BVSS (Virtual Stacking System)</li> <li>➤ Static and LACP link aggregation</li> <li>➤ EAPS, ERPS</li> <li>➤ ISSU</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>➤ Console, Telnet, SSH</li> <li>➤ HTTP, HTTPS</li> <li>➤ SNMP v1/v2/v3</li> <li>➤ Upload and download of TFTP files</li> <li>➤ RMON</li> <li>➤ NTP</li> <li>➤ SPAN, RSPAN</li> <li>➤ ZTP (Zero Touch Provisioning)</li> </ul>

Feature	S5300-48T4X
Stackability	2
MAC address Capacity	32764
Jumbo frame	9k
ARP Capacity	512
NDP Capacity	152
VLAN IDs	4k
MSTP Instance Num	32
QoS ipv4 flow entry	ifp:2174 efp:768

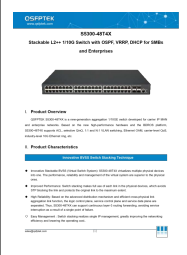
QoS ipv6 flow entry	ifp:1024 efp:768
IPv4 ACL	ifp:2174 efp:768
IPv6 ACL	ifp:1024 efp:768
FIBv4	512
FIBv6	152
Multicast Routing Table (IPv4)	x
Multicast Routing Table (IPv6)	x
Maximum VRRP Group Num	255
Maximum MLAG Group Num	x
VXLAN tunnel	x

## V. Ordering Information

Item	Description
S5300-48T4X	Ethernet switch with 48x GE ports, 4x 10GE SFP ports (1x RJ45 CLI port, 48x 10/100/1000BASE-T RJ45 ports, 4x 10GE/GE SFP+ uplink ports, single AC220V power supply, the cooling fan, 1U, standard 19-inch rack-mounted installation)

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## Documents / Resources

	<p><a href="#">QSFPTek S5300-48T4X Stackable L2++ 1-10G Switch</a> [pdf] Owner's Manual S5300-48T4X Stackable L2 1-10G Switch, S5300-48T4X, Stackable L2 1-10G Switch, L2 1-10 G Switch, 1-10G Switch, Switch</p>
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## References

- ☁ [QSFPTek - Compatible Optical Transceivers Factory Outlet](#)

[Manuals+](#)