



DATASHEET

S5900-24S 24-Port 10GE SFP+ L2/L3/MPLS Stackable Managed Switch

All 10GE Security Routing Switch

Overview

S5900-24S is all 10GE security routing Ethernet switch with high-performance, high-security and multi-service. S5900-24S has advanced hardware design with hot-swapped power redundancy. It can support 24 all 10GE ports. Advanced non-blocking array exchange and huge packet cache support smooth operation at the extreme circumstance. It is for IP MAN convergence layer and large-scale enterprise zone or the core of the network layer.

Primary Product Highlights

I. High Performance Business Forwarding Capacity

- Up to 480Gbps switching capacity and backplane capacity
- High Performance secondary distributed core switching network
- IPV4/IPV6/MPLS line speed forwarding capacity

II. Rich L2/L3 Business Processing Ability

- MPLS, L2/L3 VPN and VPLS
- BGP/OSFP/RIP/multiple static router protocols
- PIM-SM/DM L3 multicast and various L2 multicast
- Flexible port-based QinQ, 1:1 and N:1 Vlan

III. Resilient QoS and Traffic Shaping

- 8 priority queues and scheduler of SP, WRR and SP+WRR
- 2-rate 3-color and QoS remark traffic shaping
- Tail-drop and WERD congestion control
- SFlow traffic analysis

IV. Carrier Class Equipment Stability and Network Resilience

- VRRP/GERP/MSTP/Smartlink
- 1+1 hot-swappable redundant power supplies

Specification

Ports	S5900-24S
10GE SFP+ Ports	24
General	
Switch Chip / CPU	BCM56842
Switching Capacity	480Gbps
Throughput (IPv4/IPv6)	360Mpps
SDRAM Memory	512MB DDR2
Flash Memory	16MB
Power Requirements	
Power Supply	AC: Input 100~240V, 50~60Hz DC: Input -36V~-72V
Power Consumption	Full-load ≤120W
Environmental	
Operating Temperature	0° C~55° C
Storage Temperature	-20° C~70° C
Relative Humidity	10%~90%, no condensing
Physical	
Dimensions (WxDxH)	437mm × 360mm × 44mm
Weight	≤8kg

Product Features and Benefits

Features	Benefits
L2 Features	
MAC	<ul style="list-style-type: none"> ➤ 128K MAC address ➤ MAC Black Hole ➤ Port MAC Limit ➤ Source MAC filtration
VLAN	<ul style="list-style-type: none"> ➤ 4K VLAN entries ➤ Port-based/MAC-based/IP subnet-based VLAN ➤ Port-based QinQ and Selective QinQ (StackVLAN) ➤ 1:1 and N:1 VLAN ➤ VLAN Swap and VLAN Remark ➤ PVLAN to realize port isolation and saving public-vlan resources ➤ GVRP
Spanning Tree Protocol	<ul style="list-style-type: none"> ➤ IEEE 802.1D Spanning Tree Protocol (STP) ➤ IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) ➤ IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) ➤ Remote loop detecting ➤ BPDU protection ➤ Root protection ➤ RRPP ring topology ➤ RRPP instance
Port	<ul style="list-style-type: none"> ➤ Bi-directional bandwidth control ➤ Static link aggregation and LACP(Link Aggregation Control Protocol) ➤ Port mirroring and traffic mirroring
Security Features	
User's Security	<ul style="list-style-type: none"> ➤ Anti-ARP-spoofing ➤ Anti-ARP-flooding ➤ IP Source Guard create IP+VLAN+MAC+Port binding ➤ 802.3ad Link (LACP) ➤ Port Isolation ➤ MAC address binds to port and port MAC address filtration ➤ IEEE 802.1x and AAA/Radius authentication

Features

Benifits

Security Features

Device Security	<ul style="list-style-type: none"> ➤ Anti-DOS attack(such as ARP, Synflood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack ➤ SSHv2 Secure Shell ➤ SNMP v3 encrypted management ➤ Security IP login through Telnet ➤ Hierarchical management and password protection of users
Network Security	<ul style="list-style-type: none"> ➤ User-based MAC and ARP traffic examination ➤ Restrict ARP traffic of each user and force-out user with abnormal ARP traffic ➤ Dynamic ARP table-based binding ➤ IP+VLAN+MAC+Port binding ➤ L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet ➤ Port-based broadcast/multicast suppression and auto-shutdown risk port ➤ URPF to prevent IP address counterfeit and attack ➤ DHCP Option82 and PPPoE+ upload user's physical location ➤ Plaintext authentication of OSPF、RIPv2 and BGPv4 packets and MD5 cryptograph authentication

IP Routing

IPv4	<ul style="list-style-type: none"> ➤ ARP Proxy ➤ DHCP Relay ➤ DHCP Server ➤ Static route ➤ RIPv1/v2 ➤ OSPFv2 ➤ BGPv4 ➤ ECMP ➤ Strategy route ➤ Route policy
IPv6	<ul style="list-style-type: none"> ➤ MLD Snooping ➤ IPv6 telnet ➤ DHCPV6 Snooping ➤ IPv6 ACL ➤ IPv6 Web management ➤ ospfv2/v3 ➤ ripv1/v2 ➤ pim-dm/pim-sm/pim-ssm ➤ igmp/igmp-proxy

Features

Benifits

IP Routing

IPv6

- bgp4
- mld/mld-proxy
- ldp/mppls
- DHCPv6 relay/Server/client
- isis4
- Static route
- Vrrp
- mail-alarm
- syslog
- pppoeplus
- urpf
- sntp
- ping/ping6

Service Features

ACL

- Standard and extended ACL
- Time Range ACL
- Rate-limit on sending and receiving packet on port
- Packet redirection
- Port-based flow-control
- Two-speed three-color CAR
- Packet filter providing filtering based on source/destination MAC address, source/destination IP address, port, protocol, VLAN, VLAN range, MAC address range, or invalid frame
- Packet filtration of L2~L7 even deep to 80 bytes of IP packet head

QoS

- Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-color monitor of self-defined flow
- Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Rema DHCPV6 Snooping
- CAR(Committed Access Rate)、Traffic Shaping and flow statistics
- Packet mirror and redirection of interface and self-defined flow
- Super queue scheduler based on port and self-defined flow. Each port/ flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR.

Features

Benifits

Service Features

QoS

- Congestion avoid mechanism, including Tail-Drop and WRED

Multicast

- IGMPv1/v2/v3
- IGMPv1/v2/v3 Snooping
- IGMP Filter
- MVR and cross VLAN multicast copy
- IGMP Fast leave
- IGMP Proxy
- PIM-SM/PIM-DM/PIM-SSM
- PIM-SMv6, PIM-DMv6, PIM-SSMv6
- MLDv2/MLDv2 Snooping
- MSDP

Reliability

Loop Protection

- EAPS and GERP (recover-time <50ms)
- Loopback-detection

Link Protection

- FlexLink (recover-time <50ms)
- RSTP/MSTP (recover-time <1s)
- LACP (recover-time <10ms)
- BFD

Device Protection

- VRRP host backup
- Double fault-tolerant backup of host program and configuration file
- 1+1 power hot backup

Maintenance

Network Maintenance

- Telnet-based statistics
- RFC3176 sFlow
- LLDP
- 802.3ah Ethernet OAM
- RFC 3164 BSD syslog Protocol
- Ping and Traceroute

Device Management

- Command-line interface (CLI) , Console, Telnet and WEB configuration
- System configuration with SNMPv1/v2/v3
- RMON (Remote Monitoring)1/2/3/9 groups of MIB
- NTP(Network Time Protocol)
- GN.Link II Server

Features

Benifits

Maintenance

Device Management

- NGBNView network management
 - WEB-based network management
 - Ping and Traceroute
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