FS

S5800 Series Switches

IDEAL FOR ENTERPRISE, DATA CENTER, METRO AND HCI NETWORKS

Models: S5800-48T4S; S5800-48F4SR; S5800-48T4S-DC; S5800-48F4SR-DC

Overview

S5800 series routing switches are high performance 1G/10G switch designed to meet the requirements of next generation enterprise, data center, Metro and HCI (Hyper-Converged Infrastructure) networks.

Based on FSOS, the S5800 series delivers performance and robust feature support, such as Priority Flow Control (PFC), Explicit Congestion Notification (ECN) and data center TCP, etc. It also support MLAG function which improves the reliability of the network links from single board grade to device grade.

Benefits

- IEEE802.1ag and ITU-T Y.1731 OAM
- PFC/ECN/Data Center TCP
- MLAG (Multi-Chassis Link Aggregation)
- NVGRE/VXLAN/GENEVE
- RPC-API for SDN
- ECMP/VRRP/VARP/STP/RSTP/MSTP/ERPS

Key Features

Data Center Features

Support leading edge Data Center features: Priority Flow Control (PFC), explicit Congestion Notification (ECN) and Data Center TCP, etc.

Support MLAG (Multi-Chassis Link Aggregation) to aggregate links across different devices. MLAG can build an Active-Active system to improve the reliability of the network links from single board grade to device grade.

Support overlay technology (include NVGRE/VXLAN/GENEVE, etc.). Overlay can make layer 2 packets across the layer 3 networks by using NVGRE/VXLAN/GENEVE header to encapsulate the entire Ethernet packets. Overlay resolves the problem of MAC table size limitation in traditional layer 2 networks, resolves the problem of VLAN id count limitation, and resolves the problem network dynamic adjustment which cannot achieve by VLAN/VPN.

Support RPC-API for SDN (Software Defined Network)

High Reliability

Support 1+1 load-sharing AC/DC power supplies and 2+1 redundant variable-speed fans as standard features, protecting the switch from a single power supply or fan failure.

Support real-time environment monitoring technology to detect the chipset temperature, status of fan and power, etc.

Support LACP/ECMP/VRRP/VARP/STP/RSTP/MSTP/Smart Link/BFD/ERPS/G.8031/G.8032/Load-Balancing, etc. to protect the network traffic all-around effectively.

Support patented technology "Sysmon" for CPU status monitoring can take action when system is error.

Outstanding QoS Control

Provide 13 hardware queues per-port (8 unicast queues, 4 multicast queues and 1 monitor queue).

Support multi-stage scheduling technology such as WDRR (Weighted Deficit Round Robin)/SP (Strict Priority) and TD (Tail Drop)/WRED (Weighted Random Early Detection) to prevent congestion.

Support flexible queue scheduling mechanism to do the shaping for queue or port traffic.

Support ingress and egress policer for intelligent bandwidth monitoring.

Support srTCM (Single Rate Three Color Marker) and trTCM (Two Rate Three Color Marker)

Triple-play Service Support

Offer high bandwidth for Triple-Play services such as IPTV, video monitoring. The built-in QoS capabilities and flexible queuing technologies guarantee high quality of services.

Support rich multicast protocol set (IGMP Snooping, IGMP v1/v2/v3, PIM-SM).

Support up to 2K multicast groups and 4K logical replications per group.

Support IPTV service and multicast latency control.

Comprehensive Network Security Policy

Support subscriber-class/switch-class/network-class security control.

Support IPv4/IPv6/MAC ACL, which can filter IPv4/IPv6/Non-IP packet respectively. Besides that, extended

Key Features

IPv4/IPv6 ACL which can match Layer 2/Layer 3/Layer 4 information in one rule is available. The ACLs can apply to physical ports/vlan/port group/vlan group.

Support ARP Inspection and IP Source Guard features, which prevents network from malicious ARP attack.

Comprehensive Network Security Policy

Support CPU Traffic Protection, Storm Control and CPU load optimization features.

Support centralized 802.1x authentication feature to forbidden illegal user accessing network.

Intelligent Ethernet OAM

Support IEEE802.1ag and ITU-T Y.1731 end-to-end OAM.

Support fault management technique includes CCM, LTM and LBM.

Support peer discovery, link monitoring, network fault indication, remote loopback and MIB parameter retrieval according to the standard 802.3ah EFM.

Convenient Management Features

Support varied management interfaces, including console port/inband network ports/outband network port/USB port.

Support CLI (Command Line Interface), web management, Telnet and FTP connection.

Support SNMPv1/v2/v3, SSH2.0, SSL and OAM.

Technical Specification

S5800 series switches come with advanced hardware architecture design and abundant L2 and L3 features. Here's a look at the details.

CHARACTERISTICS

	S5800-48T4S	S5800-48T4S-DC	S5800-48F4SR	S5800-48F4SR-DC
Port				
Ports	48x 10/100/1000BASE-T RJ45, 4x 10G SFP+		48x 1G SFP, 4x 10G SFP+	
Max. 10G Ports	4		4	
Max. 1G Ports	52		48	
Console Port	1		1	
Ethernet Management Port	1		1	
USB Port	1		1	

CHARACTERISTICS

	S5800-48T4S	S5800-48T4S-DC	S5800-48F4SR	S5800-48F4SR-DC
Operating System				
OS	FSOS		FSOS	
Key Components				
CPU	SOC (Dual core/ARM A53)		SOC (Dual core/ARM A53)	
Performance				
Layer Type	Layer 3		Layer 3	
Switching Capacity	176 Gbps		176 Gbps	
Forwarding Rate	132 Mpps		132 Mpps	
Max./Min. Latency	0.96μs/0.66μs		0.96μs/0.66μs	
DDRIII Capacity	2GB		2GB	
Flash Memory	8GB (eMMC)		8GB (eMMC)	
RAM	2GB		2GB	
Packet Buffer	9MB		9MB	
Jumbo Frame	9.6KB		9.6KB	
MAC Address	114K		114K	
Number of VLANs	4K		4K	
MTBF (Hour)	204,935		189,901	
Authentication Methods	802.1X, AAA		802.1X, AAA	
Remote Management Protocol	SNMP, RMON, HTTP Telnet, SSH		SNMP, RMON, HTTP Telnet, SSH	
Status Indicators	System, LINK activity, PWR		System, LINK activity, PWR	
Power				
Input Voltage	100-240VAC, 50-60Hz, 2A	-48V to -60VDC	100-240VAC, 50-60Hz, 2A	-48V to -60VDC
Typical Power Consumption	52W	52W	65W	65W
Max. Power Consumption	55W	55W	70W	70W

CHARACTERISTICS

	S5800-48T4S	S5800-48T4S-DC	S5800-48F4SR	S5800-48F4SR-DC
Physical and Environmental				
Dimensions (H x W x D)	1.73″ x 17.5″ x 14.6″ (43.6 x 440 x 370mm)		1.73″ x 17.5″ x 14.6″ (43.6 x 440 x 370mm)	
Rack Space	1U		1U	
Hot-swappable Power Supplies	2 (1+1 Redundancy)		2 (1+1 Redundancy)	
Redundant Fans	3		3	
Airflow	Front-to-Back		Front-to-Back	
Acoustic Noise	40dB		40dB	
Operating Temperature	32℉ to 113℉ (0ºC to 45ºC)		32℉ to 113℉ (0ºC to 45ºC)	
Storage Temperature	-40℉ to 158℉ (-40ºC to 70ºC)		-40℉ to 158℉ (-40ºC to 70ºC)	
Operating Humidity	0 to 95% (Non-condensing)		0 to 95% (Non-condensing)	
Storage Humidity	0 to 95% (Non-condensing)		0 to 95% (Non-condensing)	
Weight	13.44 lbs (6.1kg)		13.77 lbs (6.25kg)	
Warranty				
Warranty	5 Years		5 Years	

FEATURES

Functionality	Description
Ethernet Features	• Support full duplex, half duplex, and auto-negotiation duplex • Support auto-negotiation port speed • Support Jumbo Frame • Support Flow Control • Support Storm Control • Support Port-block • Support Port-isolate • Support Layer 2 protocol packet transparent transmission

FEATURES

Functionality	Description
VLAN Features	• Support 4094 VLANs • Support VLAN access mode: Access/Trunk • Support Default VLAN • Support VLAN Classification • Support basic QinQ, selective QinQ and VLAN Mapping • Support VLAN statistics • Support Private VLAN • Support Guest VLAN • Support Voice VLAN
MAC Address Table	• Support static MAC address • Support dynamic MAC address learning and aging • Support hardware learning • Support black hole MAC address • Support MAC address drift detection
Link Aggregation	• Support static link aggregation • Support LACP • Support static load balancing • Support dynamic load balancing (DLB) • Support self-healing
Reliability Features	• Support STP/RSTP/MSTP protocol • Support STP Protocol Protection (BPDU Filter/Guard, Root Guard, Loop Guard, Anti TC-BPDU attack) • Support single ERPS ring/tangent ERPS rings/intersecting ERPS rings • Support ERPS compatible with RRPP • Support G.8031 • Support G.8032 • Support port Loopback Detect • Support BFD • Support VRRP • Support MLAG • Support Ethernet OAM: EFM/CFM/Y.1731 • Support Software class process monitoring (Sysmon) • Support Hardware Watch Dog

FEATURES

Functionality	Description
ARP Features	• Support static ARP • Support dynamic ARP leaning and aging • Support Gratuitous ARP • Support basic ARP-Proxy and local ARP-Proxy
IPv4 Forwarding	• Support IPv4 static routes • Support IPv4 static routes co-work with IP SLA • Support VRF • Support uRPF check • Support RIPv1, RIPv2 • Support OSPFv2 • Support IS-IS • Support BGP • Support Route-map and Prefix list • Support Policy-based Routing (PBR) • Support ICMP redirect and ICMP unreachable • Support ECMP
IPv6 Forwarding	• Support ICMPv6 • Support NDP • Support PMTU • Support IPv6 static routes • Support RIPng • Support OSPFv3 • Support IPv6 over IPv4 Tunnel • Support 6to4 Tunnel • Support ISTAP Tunnel • Support DHCPv6 • Support IPv6 prefix list
Multicast Features	• Support IGMP v1/v2/v3 • Support IGMP agent • Support IGMP SSM Mapping • Support PIM-SM,PIM-SSM,PIM-DM • Support MLDv1/v2, MLDv1/v2 snooping • Support MVR and MVR6 • Support PIM-SMv6

FEATURES

Functionality	Description
Data Center Features	• Support VARP • Support VXLAN • Support GRE Tunnel • Support NVGRE Tunnel • Support GENEVE Tunnel • Support DCBX • Support priority-based flow control (PFC) • Support PFC Deadlock detection
QoS Features	• Support traffic classification based on COS/DSCP (simple classification) • Support traffic classification based on ACL (complex classification) • Support Remark the priority fields (COS/DSCP) of the packet • Support queue scheduling based on traffic classification • Support flow redirection • Support flow mirror • Support traffic policing • Support traffic shaping • Support traffic statistics • Support SP (Strict Priority) scheduling • Support WDRR (Weighted Deficit Round Robin) scheduling • Support SP+WDRR mixed scheduling • Support TD (Tail Drop) • Support WRED (Weighted Random Early Detection) • Support ECN tags based on TD and WRED
Security Features	• Support SSH • Support Radius • Support TACAS+ • Support AAA • Support port based dot1x and MAC based dot1x • Support configure dot1x Guest via command or Radius server • Support access control list (ACL) • Support traffic classification based on source and destination IP/source and destination MAC/source and destination layer for protocol number / VLAN ID • Support ACL matching User defined fields (UDF) • Support ACL active based on Time-Range • Support ARP inspection • Support IP source guard

FEATURES

Functionality	Description
Security Features	• Support port security to limit the MAC address learning on interface • Support VLAN security, limit the number of VLAN MAC • Support CoPP (Control Plane Protect) black & white list and rate limit features • Support CPU Traffic Limit • Support Prevent DDOS attack • Support ACL filtering Telnet/SSH login • Support 802.1AE (MacSec) • Support Link-Flapping detection
Configuration and maintenance	• Support DHCP Server • Support DHCP Relay • Support DHCP Snooping • Support DHCP Client • Support DHCP Option82 • Support RMON • Support sFlow • Support IP SLA • Support IPFIX and MFP • Support SGT • Support Latency/Buffer Monitor • Support EFD (Elephant Flow Detection) • Support NTP • Support port Errdisable state detection and recovery • Support configure static DNS client • Support LLDP • Support port loopback • Support hardware loopback (internal/external) • Support to configure system time • Support to configure time zone
Debugging Features	• Support Debug based on modules • Support CPU/memory usage display and alarm • Support Device temperature/PSU/FAN/status display and alarm • Support user operation logs • Support Management of logs, alarms, and debugging information • Support VCT (Virtual Cable Test) • Support detailed diagnostic-information collection

FEATURES

| Functionality	Description
Debugging Features	• Support reboot information logging • Support network diagnostics (ping/traceroute) • Support mirror: support use port/vlan/cpu as mirror source • Support use port/port group/vlan/cpu as mirror destination • Support ERSPAN • Support to CPU/From CPU packets statistics • Support L2 ping • Support UDLD (Unidirectional Link Detection)
Management Features	• Support inband and outband management ports • Support privileged user priority and privileged commands • Support Network management based on SNMPv1/v2/v3 • Support Public and private MIB • Support Public and private Trap • Support Configuration and management based on WEB UI • Support Configuration and management based on RPC-API • Support SmartConfig (Automatically configuration when system start) • Support OVSDB • Support change the system specifications by choose different STM Profiles
Management Features	• Support feature configuration based on License • Support restore factory default configuration • Support manual/schedule reboot • Support upgrade with the local image file/remote TFTP server • Support online upgrade Uboot
File System	• Support file system to manage the files and directories • Support upload/download files via FTP/TFTP • Support transmit files via Xmodem

Accessories

S5800-48T4S/S5800-48F4SR
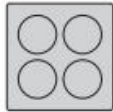
Console Cable*1

Power Cords*2
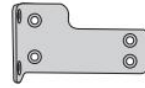
Mounting Brackets*2

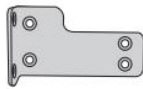M4 Screws*10

Rubber Pads*4

Network Cable *1
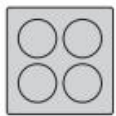
Grounding Cable*1

S5800-48T4S-DC/S5800-48F4SR-DC

Console Cable*1

Mounting Brackets*2

M4 Screws*10

Rubber Pads*4

Network Cable *1

Grounding Cable*1

Terminal Block Connectors *2

Ordering Information

ID	Description
#129082	Hot-swappable AC Power Module 150W, for S5800-48F4SR, S5800-48T4S, S5850-24S2Q
#80589	Hot-swappable DC Power Module 150W, for S5800-48F4SR, S5800-48T4S, S5850-24S2Q
#100590	Metro Advanced License for S5800, S5850, S8050 Series Switches, Includes MPLS, VXLAN-BGP-EVPN, Permanent

United Kingdom   Russia

United States

Germany

China

Singapore

Australia

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