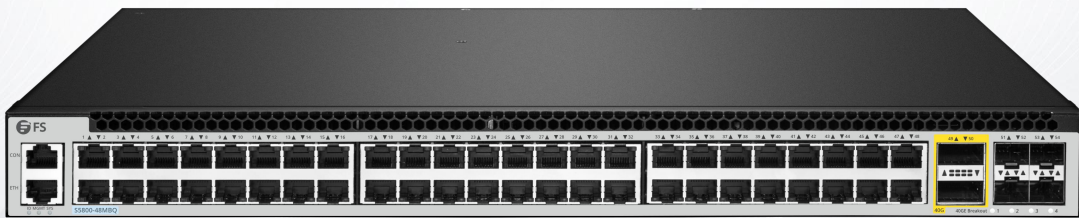


S5800-48MBQ Switch

IDEAL FOR NEXT GENERATION ENTERPRISE, WIFI6 ACCESS, METRO AND HCI (HYPER CONVERGED INFRASTRUCTURE) NETWORKS



Overview

S5800-48MBQ Switch is a high-performance Layer 3 Ethernet switch with 48x 100M/1000M/2.5G BASE-T RJ45 and 4x 25Gb SFP28 and 2x 40Gb QSFP+ in a compact 1U form factor. The FSOS delivers robust feature support, provide complete Layer 3 network features.

Built from the ground up with the combination of advanced hardware and software, the switch provides a powerful Layer 3 routing solution for next generation enterprise, WIFI6 Access, Metro and HCI (Hyper Converged Infrastructure) networks.

Benefits

- Layer 3 Switch
- Multiple Rates-100M/1000M/2.5G/10G; 10G/25G/40G Uplinks
- MLAG (Multi-Chassis Link Aggregation)
- Support Overlay Technology
- RPC-API for SDN
- Support LACP / ECMP / VRRP / VARP etc.
- 1+1 Redundancy Power Supplies

Key Features

System Design for Green and Energy Saving

Intelligent FAN adjustment and real-time power consumption monitoring technology are provided for the cost of maintenance redundancy and help to build a green and energy saving networks.

Customized Profile for Different Deployment Scenarios

Support Flexible Table Management (FTM) technology to offer multiple table size configuration profiles as optimized choices for different network scenarios.

Support up to 112K * MAC address tables.

Support up to 56K * IP routing tables.

Intelligent Ethernet OAM

With the IEEE802.1ag and ITU-T Y.1731 end-to-end OAM, Ethernet service providers can monitor the services, survey the end-to-end performance and ensure the service quality match the agreement.

The fault management technique includes CCM, LTM and LBM. Performance targets include measure for latency and jitter.

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

Data Center Features

Support 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 layer2 packets across the layer3 networks by using NVGRE/VXLAN/GENEVE header to encapsulate the entire Ethernet packets.

Support RPC-API for SDN (Software Defined Network).

High Reliability

Support AC/DC 1+1 redundancy; Fans support 1+1 redundancy.

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.

Key Features

Outstanding QoS Control

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, which support to adjust the granularity according to the port speed.

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.

Support built-in QoS capabilities and flexible queuing technologies to guarantee high quality of services.

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

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 IPv4/IPv6 ACL which can match Layer2 / layer3 / layer4 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 prevent network from malicious ARP attack.

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

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

Convenient Management Features

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

Support SNMP v1/v2/v3.

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

Support OAM to make management more convenient.

Support SSH2.0, SSL, etc. to ensure security of management.

Technical Specification

S5800-48MBQ

Ports

100M/1000M/2.5G BASE-T RJ45	48
10G/25G SFP28	4
40G QSFP+	2
Management Port	1
Console Port	1

Notes:

RJ45 ports can be used as 100M/1000M/2.5G ports for Ethernet connection. SFP28 can be used for 10/25G connection. QSFP+ can be used for 40G or 4x 10G connection.

S5800-48MBQ

Operating System

OS	FSOS
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Key Components

CPU	ARM A53 CPU
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Performance

Layer Type	Layer 3
Switching Capacity	600 Gbps
Forwarding Rate	445.76 Mpps
Max./Min. Latency	0.66us/0.96us
Flash Memory	8GB EMMC (OS) 4MB SPI Flash (Boot)
DRAM	2GB

CHARACTERISTICS

	S5800-48MBQ
Packet Buffer	9MB
Jumbo Frame	9,600
MAC Address	98,304
ARP Table	12,288
Ipv4 Routing Table	57,344
Ipv6 Routing Table	4,096
BGP	Support
Number of VLANs	4,094
MTBF (Hours)	99,936.04
Switch Method	Store and Forwarding / Cut Through
Authentication Methods	802.1X, AAA
Remote Management Protocol	Telnet /SSH/WEB GUI/ SNMP
Status Indicators	System, LINK Activity, FAN, PWR, MGMT
Power	
Max. Power Consumption	250W
Input Voltage	100-240VAC, 50/60Hz
Max. Power Consumption	250W
Physical and Environmental	
Dimensions (HxWxD)	1.72"x14.92"x17.40" (43.6mm*379mm*442mm)
Rack Space	1U
Power Device	1+1 Redundancy Hot-swappable
Fan Number	3+1 Redundancy Hot-swappable
Airflow	Front-to-Back

CHARACTERISTICS

	S5800-48MBQ
Weight	6.96kg (Include 2 Power Modules)
Distance	100M
Operating Temperature	0°C to 45°C
Storage Temperature	-40°C to 70°C
Operating Humidity	10% to 90% (Non-condensing)
Storage Humidity	0 to 95% (Non-condensing)
Temperature Alarm	50°C
Warranty	
Warranty	5 Years

FEATURES

Functionality	Description
Ethernet Features	<ul style="list-style-type: none"> • Support Ethernet interface operating modes (full duplex, half duplex, and auto-negotiation) • Support Ethernet interface operating rates • Support Jumbo Frame • Support Flow-control tx/rx • Support Port based storm-control • Support Port-block (know-unicast/unknow-unicast, know-multicast/unknow-multicast, broadcast) • Support L2/L3/All Port-isolate • Support Uni-direction isolate • Support L2 Protocol Tunnel (support CDP/CFM/DOT1X/LLDP/SLOW-PROTO/STP/VTP) • Support Store-and-forward • Support Cut-through
VLAN Features	<ul style="list-style-type: none"> • Support VLAN access mode: Access/Trunk • Support Default VLAN • Support VLAN Classification (port based/mac based/ip based/protocol based) • Support Basic QinQ • Support Selective QinQ • Support VLAN Mapping (1:1 VLAN Translation) • Support VLAN Statistics • Support Private VLAN • Support Voice VLAN • Support Guest VLAN
MAC Address Table	<ul style="list-style-type: none"> • Support Automatic learning and aging of MAC addresses • Support Hardware Learning • Support Static and dynamic MAC address entries • Support blackhole MAC • Support MAC Flapping detect • Support Port Bridge
LAG	<ul style="list-style-type: none"> • Support Static-LAG & LACP • Support LAG load balance (SLB) • Support LAG load balance (DLB) • Support LAG load balance (RR) • Support LAG Self-healing

FEATURES

Functionality	Description
xSTP	<ul style="list-style-type: none"> • Support Spanning-Tree Protocol • Support Rapid Spanning-Tree Protocol • Support Multi-instance Spanning-Tree Protocol • Support BPDU Filter/Guard • Support Root Guard • Support Loop Guard • Support Anti TC-BPDU attack
ERPS	<ul style="list-style-type: none"> • Support Single ERPS ring • Support tangent ERPS rings • Support intersecting ERPS rings • Support compatible with RRRP
G.8031	<ul style="list-style-type: none"> • Support G.8031 (Ethernet Linear Network Protection)
G.8032	<ul style="list-style-type: none"> • Support G.8032 V1 & V2 • Support Single Ring • Support Sub Ring
Loopback Detect	<ul style="list-style-type: none"> • Support Loopback-detection
Layer 2 Multicast	<ul style="list-style-type: none"> • Support IGMPv1/v2/v3 Snooping • Support Fast leave • Support Static IGMP snooping group • Support MVR (Multicast VLAN Registration)
ARP	<ul style="list-style-type: none"> • Support Static and dynamic ARP entries • Support Aging of ARP entries • Support Gratuitous ARP • Support basic ARP-Proxy • Support local ARP-Proxy
IPv4 Multicast Routing	<ul style="list-style-type: none"> • Support IGMPv1/v2/v3 • Support IGMP-Proxy • Support IGMP SSM Mapping • Support PIM-SM • Support PIM-SSM • Support PIM-DM

FEATURES

Functionality	Description
IPv4 Unicast Routing	<ul style="list-style-type: none"> • Support IPv4 Static Routes • Support blackhole Routes • Support co-work with IP SLA • Support VRF (Virtual Routing and Forwarding) • Support uRPF check • Support RIPv1/v2 • Support OSPFv2 • Support IS-IS • Support IBGP • Support EBGp • Support Route-map • Support IPv4 prefix-list • Support PBR (Policy-based Routing) • Support ICMP redirect • Support ICMP unreachable • Support ECMP (SLB) • Support ECMP (DLB) • Support ECMP (RR) • Support ECMP Self-healing
IPv6 Basic Protocol	<ul style="list-style-type: none"> • Support ICMPv6 • Support NDP • Support PMTU
IPv6 Unicast Routing	<ul style="list-style-type: none"> • Support IPv6 Static Routes • Support RIPng • Support OSPFv3
IPv6 Multicast Routing	<ul style="list-style-type: none"> • Support MLD v1/v2 • Support MLD v1/v2 Snooping • Support MVR6 • Support PIM-SM v6
IP Tunnel	<ul style="list-style-type: none"> • Support IPv6 over IPv4 Tunnel • Support 6to4 Tunnel • Support ISATAP Tunnel

FEATURES

Functionality	Description
IPv6 Service	<ul style="list-style-type: none"> • Support DHCPv6 Relay • Support DHCPv6 Snooping • Support IPv6 Prefix-list
BFD	<ul style="list-style-type: none"> • Support BFD for Static route • Support BFD for OSPFv2 • Support BFD for VRRP/Track • Support BFD for PBR
VRRP	<ul style="list-style-type: none"> • Support VRRP • Support Track for VRRP
Smart Link	<ul style="list-style-type: none"> • Support multi-instance • Support load balance • Support Multi-Link • Support Monitor-link
MLAG	<ul style="list-style-type: none"> • Support MLAG basic • Support MLAG orphan Port
EFM (802.3ah)	<ul style="list-style-type: none"> • Support Auto detection • Support Network fault detection • Support Network fault handle • Support remote loopback
CFM (802.1ag)	<ul style="list-style-type: none"> • Support Hardware CCM detect • Support MAC Ping • Support MAC Trace
Y.1731	<ul style="list-style-type: none"> • Support Latency and jitter measure
ECN	<ul style="list-style-type: none"> • Support ECN tags based on Tail Drop • Support ECN tags based on WRED
VARP	<ul style="list-style-type: none"> • Support VARP (Virtual-ARP) • Support VARP subnet

FEATURES

Functionality	Description
QoS	<ul style="list-style-type: none"> • Support Traffic classification based on COS/DSCP (simple classification) • Support Traffic classification based on ACL (complex classification) • Support Traffic classification based on inner header of the tunnel packets • Support Queue scheduling • Support Remark the priority fields (COS/DSCP) of the packet based on ACL • Support Remark the priority fields (COS/DSCP) of the packet based on Table Map • Support Flow redirection • Support Flow mirror • Support Traffic policing based on direction (in/out) of Port • Support Traffic policing based on direction (in/out) of VLAN • Support Traffic policing based on direction (in/out) of flow • Support Traffic policing based on direction (in/out) of aggregated flow • Support Queue based traffic shaping • Support Port based traffic shaping • 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 Packet counts and bytes statistics based on traffic classification • Support Packet counts and bytes statistics based on the color after traffic policing • Support Forwarded and discarded packet counts and bytes statistics • Support ECN tags based on Tail Drop • Support ECN tags based on WRED
Tunnel	<ul style="list-style-type: none"> • Support Manual configure VxLAN tunnel • Support VxLAN distributed gateway • Support VxLAN active-active access • Support Interconnect across Datacenters based on VxLAN • Support L2 Protocol packet passthrough • Support Edit DSCP in VxLan outer header • Support to enable/disable overlay split horizon per-VNI • Support GRE Tunnel • Support NVGRE Tunnel • Support GENEVE Tunnel
DCB	<ul style="list-style-type: none"> • Support LLDP support DCBX TLV • Support PFC

FEATURES

Functionality	Description
Terminal Services	<ul style="list-style-type: none"> • Support Configurations through CLI (Command Line Interface) • Support Banner configuration • Support Help information in English • Support Vty Terminal service • Support Console Terminal service
System Security	<ul style="list-style-type: none"> • Support SSHv1/v2 • Support RSA Key generation • Support RADIUS • Support TACAS+ • Support Authentication • Support Authorization • Support Accounting • Support Port based dot1x • Support MAC based dot1x • Support Guest VLAN • Support MAC/IP ACL • Support Basic Mode ACL • Support Port-group ACL • Support VLAN-group ACL • Support IPv6 ACL • Support ACL UDF • Support Time Range • Support ARP Inspection • Support IP Source Guard • Support Limitation on MAC address learning on interface • Support Limitation on MAC address learning on VLAN • Support Black list/white list • Support Rate limit • Support CPU Traffic Limit • Support Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood) • Support Telnet/SSH ACL filtering • Support Telnet/SSH IPv6 ACL filtering • Support MacSec (802.1AE) • Support Link-Flapping detection

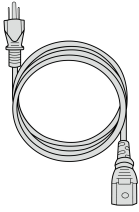
FEATURES

Functionality	Description
Network Management	<ul style="list-style-type: none"> • Support DHCP Server • Support DHCP Relay • Support DHCP Snooping • Support DHCP Client • Support DHCP Option82 • Support DHCP Option252 • Support RMON • Support sFlow v4/v5 • Support IP SLA • Support Latency Monitor • Support Buffer Monitor • Support Elephant Flow Detection • Support NTP (Network Time Protocol) • Support Errdisable detection and recovery • Support Static DNS Client • Support LLDP
Configuration Management	<ul style="list-style-type: none"> • Support Inband management interface and configuration • Support Outband management interface and configuration • Support privileged user priority and privileged commands • Support Network management based on SNMPv1/v2c/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 Configuration and management based on OVSDB • Support change the system specifications by choose different STM Profiles • Support Feature configuration based on License • Support Restore factory default configuration
File System	<ul style="list-style-type: none"> • Support File system (support directory and file management) • Support Upload and download files through FTP or TFTP • Support Upload and download files through Xmodem

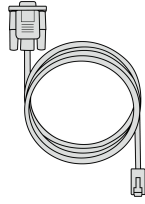
FEATURES

Functionality	Description
Debugging And Maintenance	<ul style="list-style-type: none"> • Support per-module Debug features • Support ICMP Debug • Support Software process monitor: BHM (Beat Heart Monitor) • Support Hardware Watch Dog • Support CPU usage display and alarm • Support 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 • Support Manual reboot • Support Schedule Reboot • Support Reboot Information logging • Support Ping
	<ul style="list-style-type: none"> • Support IPv6 Ping • Support Traceroute • Support Port mirror • Support Flow mirror • Support Remote mirror • Support Multi-destination mirror (m:n) • Support Use CPU as mirror source • Support Use CPU as mirror destination and analyze packet • Support ERSPAN • Support To CPU/From CPU packets statistics • Support layer2 network connectivity detection - L2Ping (MAC Ping/Trace) • Support UDLD (Unidirectional Link Detection) • Support unidirectional forwarding of the fiber • Support port loopback • Support hardware loopback (internal/external) • Support Time configuration & Timezone
Version Upgrade	<ul style="list-style-type: none"> • Support upgrade with the local image file • Support upgrade with the remote TFTP server • Support Online upgrade Uboot

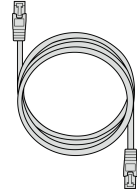
Accessories



Power Cord x2



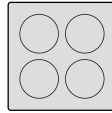
Console Cable x1



Cat5e Cable x1



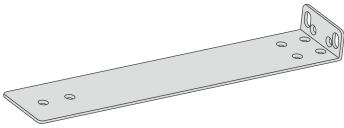
Grounding Cable x1



Rubber Pad x4



M4 Screw x12



Mounting Bracket x2



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