FS

S5850-24XMG Switch

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

Overview

S5850 series routing switches are high performance Ethernet switches to meet next generation Metro, Data Center and Enterprise network requirements, which support L2/ L3/ IPv6/ Data Center/Metro features. The switch comes with complete system software with comprehensive protocols and applications to facilitate rapid service deployment and management for both traditional L2/L3 networks and Data Center networks.

 S5850 series switches are cost-effective Ethernet access and aggregation platform to Metro/Enterprise/Data Center/HCI networks. The S5850 series switches are also ready for IPv6 deployment.

Benefits

- Layer 3 Switches
- With 2× 100Gb QSFP28 Uplinks
- Support MLAG and overlay technolog
- Industry-standard CLI & Web Management
- 1+1 AC/DC Redundant Power Supplies
- IPv4/IPv6 Dual-stack Multi-layer Switching
- Support LACP / ECMP / VRRP / VARP/ STP
- Ethernet OAM (IEEE802.3ah and IEEE802.1ag)
- RPC-API

Key Features

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 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.

High Reliability

S5850 series switches are powered by Hot-swappable power modules which supports AC/DC 1+1 redundancy; Fans support 1+1 /2+2 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.

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- P lay services such as IPTV, video monitoring. T he built-in QoS capabilities and flexible queuing technologies guarantee high quality of services.

Support rich multicast protocol set (IGMP Snooping, IGMP v 1/v2/v3, PIM-SM).

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

Support IPTV service and multicast latency control.

Key Features

Comprehensive Network Security Policy

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

IPv4/ IPv6/MAC ACL can filter IPv4/ IPv6/ Non- IP packet respectively. Besides that, extended 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. The members of port group or vlan group share a set of ACLs and save the TCAM resource.

ARP Inspection and IP Source Guard features 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, including console port/inband network ports/outband network port/USB port. Support CLI (Command Line Interface), web management, Telnet and FTP connection.

Support SNMPv 1/v2/v3, SSH2.0, SSL and OAM.

System Design for Green and Energy Saving

Intelligent FAN adjustment and real-time power consumption monitoring technology are provided for the cost of maintenanceredundancy 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.

Technical Specification

S5850-24XMG switch comes with advanced hardware architecture design and abundant L2 and L3 features. Here's a look at the details.

CHARACTERISTICS

	S5850-24XMG
Ports	
Ports	24x 10M/100M/1000M/2.5G/5G/10GBase-T , 2x 100G QSFP28
Max. 100G Ports	2
Max. 40G Ports	-
Max. 10G Ports	24
Max. 1G Ports	-
Console Port	1
Ethernet Management Port	1
USB Port	1
Operating System	
OS	FSOS
Key Components	
CPU	ARM A53 CPU
Performance	
Layer Type	Layer 3
Switching Capacity	880 Gbps
Forwarding Rate	654 Mpps
Flash Memory	8GB EMMC （OS） 4MB SPI Flash（Boot）
SDRAM	2GB
Packet Buffer	4.5MB
Jumbo Frame	9600
MLAG	Support

Technical Specification

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CHARACTERISTICS

	S5850-24XMG
MAC Address	98K
Number of VLANs	4K
Authentication Methods	802.1X, AAA
MTBF (Hours)	>90K
Remote Management Protocol	Telnet /SSH/WEB GUI/ SNMP
Status Indicators	System, LINK Activity, FAN, PWR, MGMT
Power	
Input Voltage	100-240Vac, 50/60Hz, -36 -72Vdc
Physical and Environmental	
Dimensions (HxWxD)	17.40"x14.04"x1.72" （442×356.5×43.6mm）
Rack Space	1U
Power Device	1+1 Redundancy Hot-swappable
Fan Number	2 + 2 Redundancy Hot-swappable
Airflow	Front-to-Back
Weight	6.96kg (Include 2 Power Modules)
Operating Temperature	0ºC to 45ºC
Storage Temperature	-40ºC to 70ºC
Operating Humidity	10% to 90% (Non-condensing)
Storage Humidity	0 to 95% (Non-condensing)
Temperature Alarm	50ºC
Warranty	
Warranty	5 Years

FEATURES

Functionality	Description
Ethernet Features	• Support Ethernet interface operating modes (full duplex, half duplex, and auto-negotiation) • Support Ethernet interface operating rates • Support Jumbo Frame • Support port-xconnect • 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	• Support VLAN access mode: Access/Trunk • Support Default VLAN • Support VLAN Classification (port based/mac based/ip based/protocal 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	• 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	• Support Static-LAG & LACP • Support LAG load balance (SLB) • Support LAG load balance (DLB) • Support LAG load balance (RR) • Support LAG Self-healing
xSTP	• 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

FEATURES

Functionality	Description
ERPS	• Support Single ERPS ring • Support tangent ERPS rings • Support intersecting ERPS rings • Support compatible with RRPP
G.8031	• Support G.8031 (Ethernet Linear Network Protection)
G.8032	• Support G.8032 V1 & V2 • Support Single Ring • Support Sub Ring
Loopback Detect	• Support Loopback-detection
Layer 2 Multicast	• Support IGMPv1/v2/v3 Snooping • Support Fast leave • Support Static IGMP snooping group • Support MVR (Multicast VLAN Registration)
ARP	• 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	• Support IGMPv1/v2/v3 • Support IGMP-Proxy • Support IGMP SSM Mapping • Support PIM-SM • Support PIM-SSM • Support PIM-DM
IPv4 Unicast Routing	• 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 unreachables • Support ECMP (SLB)

FEATURES

Functionality	Description
IPv4 Unicast Routing	• Support ECMP (DLB) • Support ECMP (RR) • Support ECMP Self-healing
IPv6 Basic Protocol	• Support ICMPv6 • Support NDP • Support PMTU
IPv6 Unicast Routing	• Support IPv6 Static Routes • Support RIPng • Support OSPFv3
IPv6 Multicast Routing	• Support MLD v1/v2 • Support MLD v1/v2 Snooping • Support MVR6 • Support PIM-SM v6
IP Tunnel	• Support IPv6 over IPv4 Tunnel • Support 6to4 Tunnel • Support ISATAP Tunne
IPv6 Service	• Support DHCPv6 Relay • Support DHCPv6 Snooping • Support IPv6 Prefix-list
BFD	• Support BFD for Static route • Support BFD for OSPFv2 • Support BFD for VRRP/Track • Support BFD for PBR
VRRP	• Support VRRP • Support Track for VRRP
Smart Link	• Support multi-instance • Support load balance • Support Multi-Link • Support Monitor-link
MLAG	• Support MLAG basic • Support MLAG orphan Port
EFM (802.3ah)	• Support Auto detection • Support Network fault detetion • Support Network fault handle • Support remote loopback
CFM (802.1ag)	• Support Hardware CCM detect • Support MAC Ping • Support MAC Trace
Y.1731	• Support Latency and jitter measure

FEATURES

Functionality	Description
System Power management	• Support Power supply on-spot detection • Support Power supply capability detection • Support Power capability auto configuration (PSE)
Power Supply Management	• Support Legacy PD detection • Support PD max power management • Support PD priority management • Support Power Supply Task Plan management • Support PD Mandatory power supply
operations management	• Support PSE log • Support PSE Chipset temperature inquire • Support firmware update
QoS	• 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 onACL • Support Remark the priority fields (COS/DSCP) of the packet based onTableMap • 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
VARP	• Support VARP (Virtual-ARP) • Support VARP subnetSupport ISATAP Tunne
Tunnel	• 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

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FEATURES

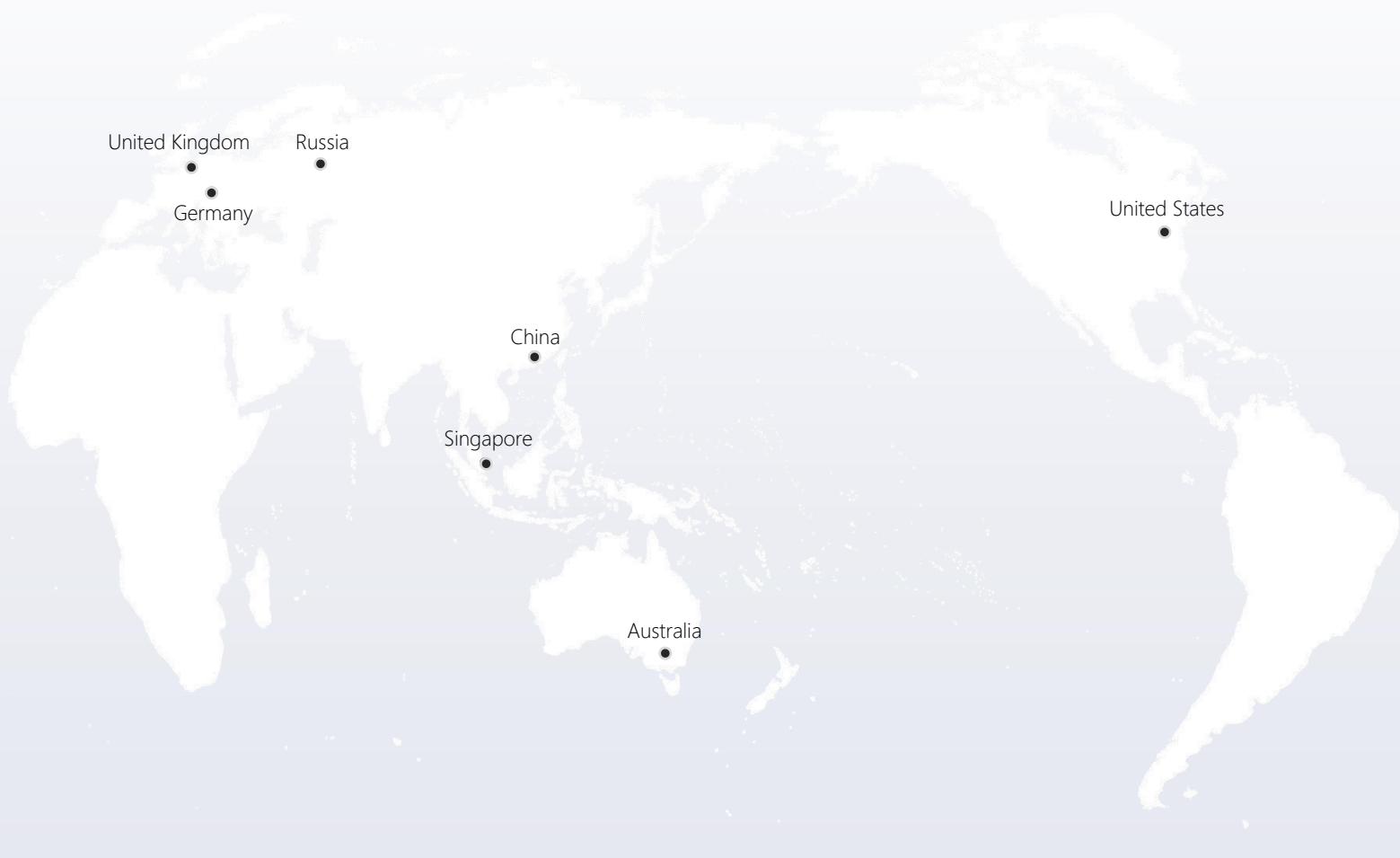| Functionality	Description
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FEATURES

Functionality	Description
DCB	• Support LLDP support DCBX TLV • Support PFC
Terminal Services	• 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	• 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/wihte list • Support Rate limit • Support CPU Traffic Limit • Support Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYNFlood) • Support Telnet/SSH ACL filtering • Support Telnet/SSH IPv6 ACL filtering • Support MacSec (802.1AE) • Support Link-Flapping detection
Network Management	• Support DHCP Server • Support DHCP Relay • Support DHCP Snooping • Support DHCP Client • Support DHCP Option82 • Support DHCP Option252 • Support RMON • Support sFlow v4/v5

FEATURES

Functionality	Description
Network Management	• 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	• Support Inband management interface and configuration • Support Outband management interface and configuration • Support privileged user proirity 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 systemstart) • Support Configuration and management based on OVSDB • Support change the system specifications by choose different STMProfiles • Support Feature configuration based on License • Support Restore factory default configuration
File System	• Support File system (support directory and file management) • Support Upload and download files through FTP or TFTP • Support Upload and download files through Xmodem
Debugging And Maintenance	• 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 • 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

FEATURES

Functionality	Description
Debugging And Maintenance	• 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	• Support upgrade with the local image file • Support upgrade with the remote TFTP server • Support Online upgrade Uboot

United Kingdom   Russia

Germany

United States

China

Singapore

Australia

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