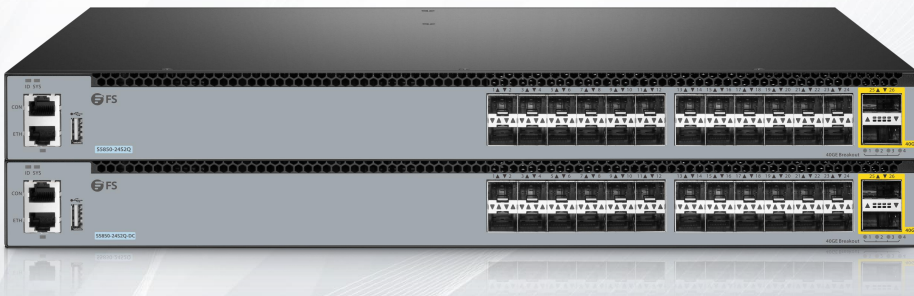


S5850-24S2Q & S5850-24S2Q-DC Switches

IDEAL FOR ENTERPRISE DISTRIBUTION DEPLOYMENTS AND VARIOUS CAMPUS NETWORKS

Models: S5850-24S2Q; S5850-24S2Q-DC



Overview

Featuring 24x 1Gb/10Gb downlinks and 2x 40Gb QSFP+ uplinks, this managed enterprise switch delivers 640 Gbps switching capacity and 480 Mpps forwarding rate and packs with redundant hot-swappable power supplies and redundant fans for superior processing performance and network reliability.

With complete system software with comprehensive protocols and applications, the switch is ideal for large-scale campus network aggregations, small and medium-sized network cores to meet the needs of high-speed, safe, intelligent enterprise networks.

Benefits

- MLAG (Multi-Chassis Link Aggregation)
- QinQ (802.1Q-in-802.1Q)
- Address Resolution Protocol (ARP)
- RIPvng/OSPFv3/BGP4+/IS-IS
- ECMP/VRRP/VARP/STP/RSTP/MSTP/ERPS/BFD
- RPC-API for SDN

Key Features

Data Center Features

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 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).

Advanced Multicast Features

Support IGMPv1/v2/v3 for IPv4, MLDv1/v2 for IPv6, IGMP Proxy and IGMP SSM mapping etc. to meet the last hop for IP multicast network requirements.

Support multicast routing protocols such as PIM-SM, PIM-DM, PIM-SSM and PIMv6.

Support MVR and MVRv6 for L2 multicast access to the L3 multicast routing networking.

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 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.

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

Technical Specification

S5850-24S2Q and S5850-24S2Q-DC switches come with advanced hardware architecture design and abundant L2 and L3 features. Here's a look at the details.

CHARACTERISTICS

	S5850-24S2Q	S5850-24S2Q-DC
Ports		
Ports	24x 10G SFP+, 2x 40G QSFP+	
Max. 40G Ports	2	
Max. 10G Ports	24	
Max. 1G Ports	24	
Operating System		
OS	FSOS	
Key Components		
CPU	SOC (Dual core/ARM A53)	
Performance		
Layer Type	Layer 3	
Switching Capacity	640 Gbps	
Forwarding Rate	480 Mpps	
Latency	0.66μs	
DDRIII Capacity	2GB	
Flash Memory	8GB (eMMC)	
RAM	2GB	
Packet Buffer	9MB	
Jumbo Frame	9,600	
MAC Address	96,000	
Number of VLANs	4,094	
MTBF (Hours)	206,988	
Authentication Methods	802.1X, AAA	
Remote Management Protocol	SNMP, RMON, HTTP, Telnet, SSH	
Status Indicators	System, LINK activity	

CHARACTERISTICS

	S5850-24S2Q	S5850-24S2Q-DC
Power		
Input Voltage	AC: 100-240VAC, 50-60Hz, 2A	DC: -48V to -60VDC
Max. Power Consumption	59W	59W
Physical and Environmental		
Dimensions (HxWxD)	1.73"x17.5"x14.6" (43.6×440×370mm)	
Rack Space	1U	
Hot-swappable Power Supplies	2 (1+1 Redundancy)	
Redundant Fans	3	
Airflow	Front-to-Back	
Acoustic Noise	50dB	
Operating Temperature	32°F to 113°F (0°C to 45°C)	
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	
Operating Humidity	0 to 95% (Non-condensing)	
Storage Humidity	0 to 95% (Non-condensing)	
Weight	13.11 lbs (5.95kg)	
Warranty		
Warranty	5 Years	

FEATURES

Functionality	Description
Ethernet Features	<ul style="list-style-type: none">• 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 Tunneling
VLAN Features	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Support static MAC address• Support dynamic MAC address learning and aging• Support hardware learning• Support black hole MAC address• Support MAC Flapping detect
Link Aggregation	<ul style="list-style-type: none">• Support static link aggregation• Support LACP• Support static load balancing• Support dynamic load balancing (DLB)• Support self-healing
Reliability Features	<ul style="list-style-type: none">• 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 port Loopback Detect• Support BFD• Support VRRP• Support MLAG• Support Software class process monitoring (Sysmon)• Support Hardware Watch Dog

FEATURES

Functionality	Description
ARP Features	<ul style="list-style-type: none">• Support static ARP• Support dynamic ARP leaning and aging• Support Gratuitous ARP• Support basic ARP-Proxy and local ARP-Proxy• Support VARP
IPv4 Forwarding	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Support ICMPv6• Support NDP• Support PMTU• Support IPv6 static routes• Support RIPv6• Support OSPFv3• Support IPv6 over IPv4 Tunnel• Support 6to4 Tunnel• Support ISTAP Tunnel• Support DHCPv6• Support IPv6 prefix list
Multicast Features	<ul style="list-style-type: none">• Support IGMP v1/v2/v3• Support IGMP Snooping• 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
QoS Features	<ul style="list-style-type: none">• Support traffic classification based on COS/DSCP (simple classification)• Support traffic classification based on ACL (complex classification)• Support queue scheduling based on traffic classification• Support Remark the priority fields (COS/DSCP) of the packet• 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)
Security Features	<ul style="list-style-type: none">• 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 num/VLAN ID• Support ACL matching User defined fields (UDF)• Support ACL active based on Time-Range• Support ARP inspection• Support IP source guard• Support port security to limit the MAC address learning on interface• Support VLAN security to limit the MAC address learning on interface• 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

FEATURES

Functionality	Description
Configuration and maintenance	<ul style="list-style-type: none">• Support DHCP Server• Support DHCP Relay• Support DHCP Snooping• Support DHCP Client• Support DHCP Option82• Support RMON• Support sFlow• Support IP SLA• 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
	<ul style="list-style-type: none">• 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• 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)
	<ul style="list-style-type: none">• Support inband and outband management ports• Support privileged user proirity and privileged commands• Support Network management based on SNMPv1/v2/v3• Support Public and private MIB• Support Public and private Trap

FEATURES

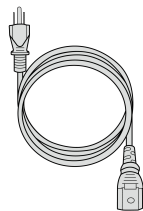
Functionality	Description
	<ul style="list-style-type: none">• Support Configuration and management based on WEB UI• Support Configuration and management based on RPC-API• Support SmartConfig (Automatically configuration when system start)
Management Features	<ul style="list-style-type: none">• Support change the system specifications by choose different STM Profiles• 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

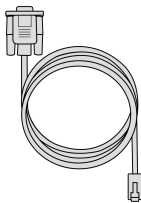
- Support file system to manage the files and directories
- Support upload/download files via FTP/TFTP
- Support transmit files via Xmodem

Accessories

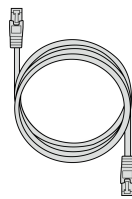
S5850-24S2Q



Power Cord x2



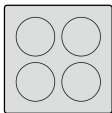
Console Cable x1



Cat5e Cable x1



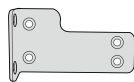
Grounding Cable x1



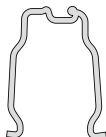
Rubber Pad x4



M4 Screw x8

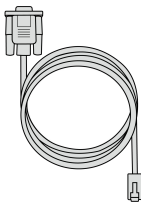


Mounting Bracket x2

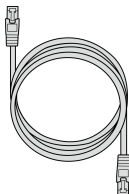


Spring Clip x2

S5850-24S2Q-DC



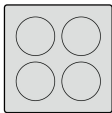
Console Cable x1



Cat5e Cable x1



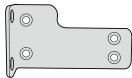
Grounding Cable x1



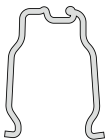
Rubber Pad x4



M4 Screw x8



Mounting Bracket x2



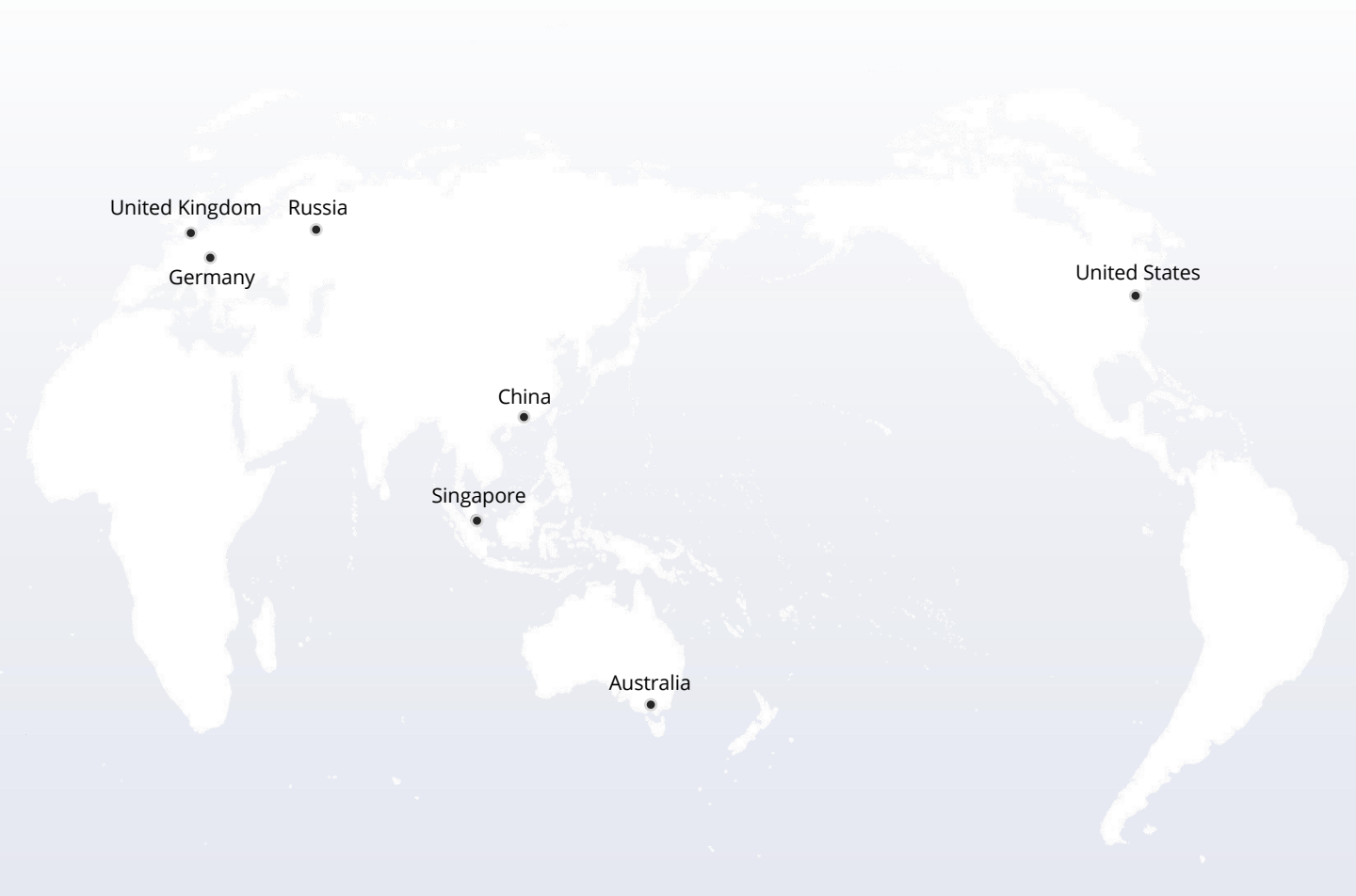
Spring Clip x2



Terminal Block Connector x2

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



 <https://www.fs.com>



The information in this document is subject to change without notice. FS has made all efforts to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty.