S5750X Series
L3 10G Copper Routing Switch

Product Overview

DCN S5750X copper series switch is full stackable routing switches with fixed, built-in 10GbE uplink ports. These fully managed switches provide high availability, scalability, security, energy efficiency, and easy operation with rich L3 features. It is ideal for aggregation or access layer for campus, enterprise, government and service provider networks.

The following models are available in the S5750X copper series.

Appearance	Description
S5750X-24T6X-SI	• 24*10/100/1000Base-T + 6*10GbE(SFP+) • 1 console, 1 USB, 1 RJ45 management port • AC power supply • Switching capacity: 168Gbps • Forwarding rate: 125Mpps
S5750X-24T6X-P-SI	• 24*10/100/1000Base-T PoE + 6*10GbE(SFP+) • 1 console, 1 USB, 1 RJ45 management port • PoE/PoE+ up to 370w • AC power supply • Switching capacity: 168Gbps • Forwarding rate: 125Mpps
S5750X-48T6X-SI	• 48*10/100/1000Base-T + 6*10GbE(SFP+) • 1 console, 1 USB, 1 RJ45 management port • AC power supply • Switching capacity: 216Gbps • Forwarding rate: 161Mpps
S5750X-48T6X-P-SI	• 48*10/100/1000Base-T PoE + 6*10GbE(SFP+) • 1 console, 1 USB, 1 RJ45 management port • PoE/PoE+ up to 740w • AC power supply • Switching capacity: 216Gbps • Forwarding rate: 161Mpps

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Key Features and Highlights

Performance and Scalability
With high switching capacity, S5750X series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.
The 10 Gigabit Ethernet connectivity of S5750X is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends on the optical module chosen).

VSF (Virtual Switch Framework)
Virtual Switch Framework can virtualize multiple DCN switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of the virtualized device is greatly enlarged by times under VSF. VSF also simplifies management work for the network administrator and provides more reliability.

Rich L3 Features
S5750X series delivers high-performance, hardware-based IP routing. RIP, OSPF, ISIS and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers. With S5750X series, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

Strong Multicast
S5750X series supports abundant multicast features. In Layer 2, such as IGMPv1/v2/v3 snooping and fast leave. L3 multicast protocols such as IGMPv1/v2/v3. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; S5750X series provides a great application experience for the customer.

High-Reliability network
MRPP is a Multi-layer Ring Protection Protocol, which is DCN's private fast Ethernet ring protocol. Comparing to spanning tree protocol, it has the advantages of fast convergence, simple protocol calculation, fewer system resources cost, and so on, which can improve the reliability of Ethernet network operation.

Comprehensive QoS
With 8 queues per port, S5750X series enable differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE802.1p, DSCP, IP precedence, and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.
S5750X series also supports Bi-directional rate-limiting, per port or traffic class preserves network bandwidth, and allows full control of network resources.

Abundant IPv6 Support
S5750X series supports IPv6 switching and routing based on hardware for maximum performance. With increased network devices growing the need for larger addressing and higher security become critical, S5750X series will be the right product to meet this requirement.

Specifications

Item	S5750X-24T6X-SI	S5750X-48T6X-SI	S5750X-24T6X-P-SI	S5750X-48T6X-P-SI
Physical port	24*10/100/1000Base-T + 6*10GbE(SFP+) Auto-MIDX	48*10/100/1000Base-T + 6*10GbE(SFP+) Auto-MIDX	24*10/100/1000Base-T PoE + 6*10GbE(SFP+) Auto-MIDX	48*10/100/1000Base-T PoE + 6*10GbE(SFP+) Auto-MIDX
Management port	1 x RJ45 Ethernet Management port			
	1x Console port			
	1x USB2.0 interface			
Performance				
Switching Capacity	168Gbps	216Gbps	168Gbps	216Gbps
Forwarding rate	125Mpps	161Mpps	125Mpps	161Mpps
Jumbo Frame	12K	12K	12K	12K
MAC Address	32K	32K	32K	32K
ARP Table	1K	1K	1K	1K
Routing Table	1K	1K	1K	1K

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ACL Table	3K	3K	3K	3K
Physical				
Dimension (W*H*D)	440mm x 44mm x 380mm	440mm x 44mm x 380mm	440mm x 44mm x 380mm	440mm x 44mm x 380mm
Relative Humidity	5%~95%, non-condensing			
Temperature	Working 0°C~50°C, storage -40°C~70°C			
Power Supply	AC:100~240VAC, 50~60Hz			
Power Consumption	<40W	<55W	<450W	<840W
PoE	NA	NA	IEEE 802.3af IEEE 802.3at Total PoE power: 370W	IEEE 802.3af IEEE 802.3at Total PoE power: 740W
Main Features				
L1, L2 Features	IEEE802.3(10Base-T), IEEE802.3u(100Base-TX), IEEE802.3z(1000BASE-X), IEEE802.3ab(1000Base-T), IEEE802.3ae(10GBase), IEEE802.3x, IEEE802.3ak(10GBASE-CX4)			
	Port loopback detection LLDP and LLDP-MED UDLD 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk LACP load balance ERPS (G.8032)			
	N:1 Port Mirroring RSPAN			
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel			
	802.1Q, 4K VLAN MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN QinQ, Flexible QinQ GVRP N:1 VLAN Translation Broadcast / Multicast / Unicast Storm Control			
	IGMP v1/v2/v3 Snooping and L2 Query ND Snooping MLDv1/v2 Snooping			
	Port Security			
	Flow Control: HOL, IEEE802.3x Bandwidth Control			
L3 Features	Static Routing, RIPv1/v2, ISIS, OSPFv2, BGP4 OSPFv3, BGP4+ OSPF multiple processes VRF-Lite LPM Routing Policy-based routing (PBR) for IPv4 and IPv6 VRRP URPF, ECMP BFD			

	IGMP v1/v2/v3, IGMP Proxy, Static Multicast Route Multicast Receive Control Illegal Multicast Source Detect
	ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit Anti ARP Cheat, Anti ARP Scan
	DNS Client, DNS Relay
	GRE Tunnel
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel ICMPv6, ND, DNSv6 IPv6 LPM Routing, IPv6 Policy-based Routing (PBR) IPv6 VRRPv3, IPv6 URPF, IPv6 RA RIPng, OSPFv3, BGP4+ MLD Snooping, IPv6 Multicast VLAN MLDv1/v2, IPv6 Anycast RP, IPv6 ACL, IPv6 QoS
QoS	8 Queues SP, WRR, SP+WRR WRED Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number Traffic Policing PRI Mark/Remark
ACL	IP ACL, MAC ACL, IP-MAC ACL Standard and Expanded ACL Based on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS Redirect and statistics Rules can be configured to port, VLAN, VLAN routing interfaces Time Ranged ACL ACL rules can be configured to port, VLAN
Security	802.1x AAA Port, MAC-based authentication Accounting based on time length and traffic Guest VLAN and auto VLAN
	RADIUS for IPv4 and IPv6
	TACACS+ for IPv4 and IPv6
	MAB
DHCPv4/v6 Traffic Monitor	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82
Traffic Monitor	sFlow Traffic Analysis
Security Network Management	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6 Syslog and external Syslog Server HTTP SSL SNMP MIB, SNMP TRAP FTP/TFTP SNTP/NTP RMON 1,2,3,9 Authentication by Radius/TACACS SSH v1/v2 Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM
Data Center Features	VSF (Virtual Switch Framework)

The contents marked with "*" need a future upgrade or are under development

Application

S5750X series switches are deployed as Gigabit access with 10G uplink in a campus, enterprise or ISP network
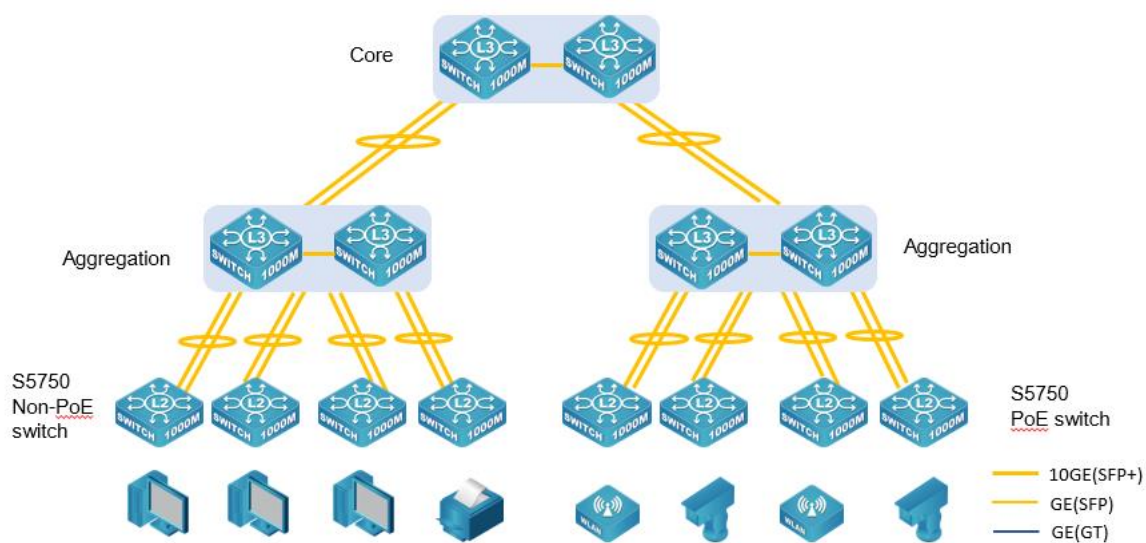
Order Information

Product	Description
S5750X-24T6X-SI	10G L3 Switch (24*10/100/1000Base-T + 6*10GbE(SFP+)) , 1 fixed AC
S5750X-48T6X-SI	10G L3 Switch (48*10/100/1000Base-T + 6*10GbE(SFP+)) , 1 fixed AC
S5750X-24T6X-P-SI	10G L3 Switch (24*10/100/1000Base-T PoE + 6*10GbE(SFP+)) , PoE/PoE+, PoE Power output 370W, 1 fixed AC
S5750X-48T6X-P-SI	10G L3 Switch (48*10/100/1000Base-T PoE + 6*10GbE(SFP+)) , PoE/PoE+, PoE Power output 740W, 1 fixed AC