


S5750X All-optical PoF (Power over Fiber) Series L3 Routing Switch

Product Overview

S5750X PoF series switches are a new generation of green, intelligent and secure access switches launched by DCN. Applicable to all-optical networks, powering remote optical APs through optical-electric hybrid cables. Provide users with high-performance, easy-to-manage, and low-cost Wi-Fi 6 AP access solutions.

| Appearance | Description |
|---|---|
|  S5750X-24NF6X-P-SI | <ul style="list-style-type: none">● 24 x 1G/2.5GBase-X(SC) PoE + 4 x 1G/10G (SFP+) ports + 2 x 1G/10G(SC)● 1 console, 1 USB, 1 RJ45 Management port● PoE / PoE+ /PoE++(90w) up to 740w● 1 fixed AC● Forwarding performance: 179Mpps● Switching capacity: 240Gbps |

Key Features and Highlights

Ready for Wi-Fi 6

S5750X series have mGig ports and also supports Power over Ethernet (PoE), including PoE+ and PoE++(90W). Certainly, it is good for 802.11ac and 802.11ax wireless LAN applications and helps you avoid having to run multiple cables between switches and access points and let your networks welcome next-generation traffic speeds and data rates.

Carrier-class reliability

S5750X series provide 10G uplink ports which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of the network.

All the business ports on S5750X series provide 6KV-8KV lightning protection capability which greatly reduces the damage rate of equipment from lightning. G.8032 provides sub-50ms protection and recovery switching for Ethernet traffic in a carrier ring topology.

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 virtualized devices 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 deliver high-performance, hardware-based IP routing. RIP, OSPF, and BGP provide dynamic routing by exchanging routing information

with other Layer 3 switches and routers. With S5750 series switch, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

Strong Multicast

S5750X series support abundant multicast features. In Layer 2, such as IGMPv1/v2/v3 snooping and fast leave. L3 multicast protocols such as IGMPv1/v2/v3, PIM-DM, PIM-SM, PIM-SSM, and even MSDP. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions; S5750 series provide a great application experience for the customer.

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.

It 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 support 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, it will be the right product to meet this requirement.

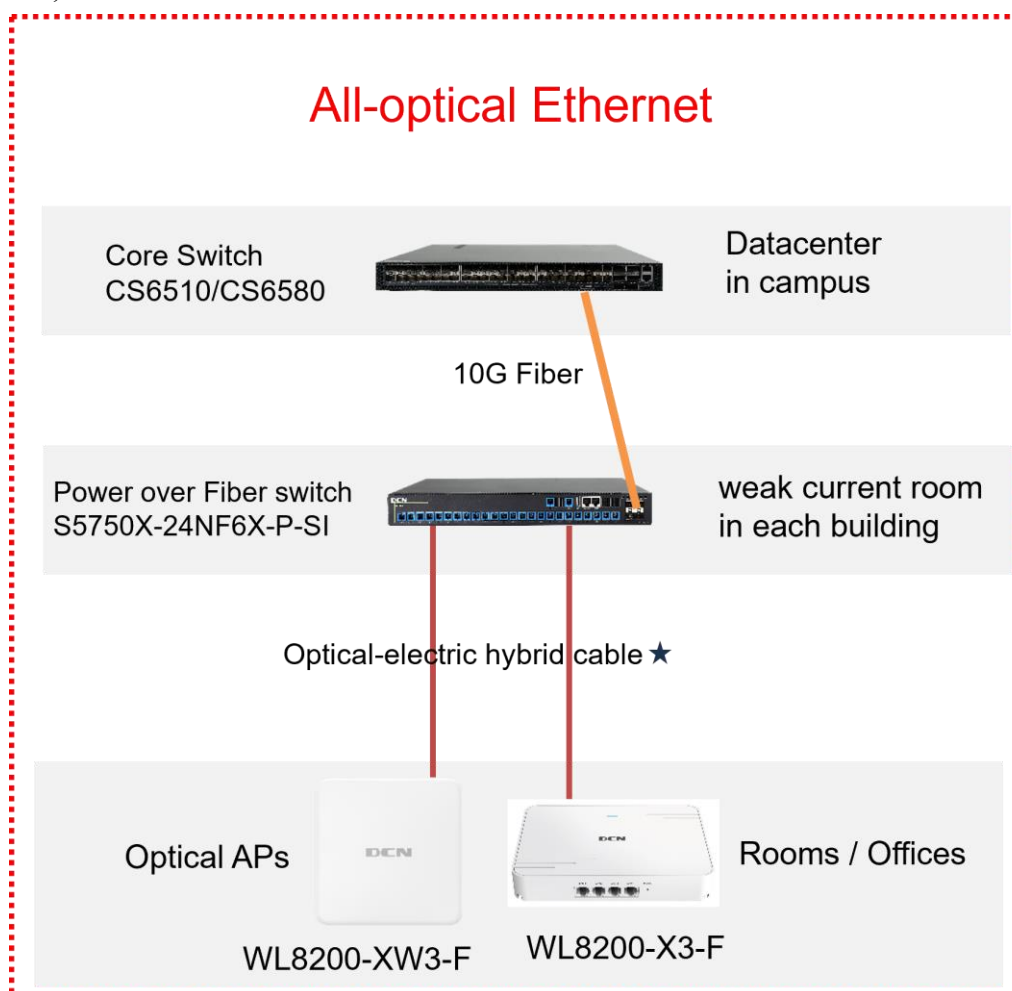
Specifications

| Item | S5750X-24NF6X-P-SI |
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| Physical port | 24 x 1G/2.5GBase-X(SC) PoE + 4 x 1G/10G (SFP+) ports + 2 x 1G/10G(SC) |
| Management port | 100/1000M Base-T RJ45 Ethernet Management port Console port (RJ45) USB2.0 interface |
| Performance | |
| Switching Capacity | 240Gbps |
| Forwarding Rate | 179Mpps |
| MAC Address | 32K |
| Routing Table | 1K |
| L3 Interface | Max 1K |
| Physical | |
| Dimension (W*H*D) | 440mm*44mm*380mm |
| Relative Humidity | 10%~90% non-condensing |
| Temperature | Working 0°C~50°C, storage -40°C~75°C |
| Power Supply | Fixed AC |
| Power Consumption | <85W |
| PoE Budget | 740W |
| PoE | IEEE 802.3af (15.4W) IEEE 802.3at (30W) IEEE 802.3bt (90W) |
| Main Features | |
| L2 features | Port loopback detection LLDP and LLDP-MED UDLD IEEE 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 |
| | IEEE802.1d(STP) IEEE802.1w(RSTP) IEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel |
| | IEEE 802.1Q, 4096 VLAN MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN QinQ, Selective 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 |
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| L3 Features | Static Routing, RIPv1/v2, OSPFv2, BGP4, OSPFv3, BGP4+ OSPF multiple processes Policy-based routing (PBR) for IPv4 and IPv6 VRRP URPF, ECMP BFD |
| | IGMP v1/v2/v3, IGMP Proxy, DVMRP, PIM-DM, PIM-SM, PIM-SSM, Anycast RP, MSDP 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 |
| | ICMPv6, ND, DNSv6 IPv6 Policy-based Routing (PBR) IPv6 VRRPv3, IPv6 URPF, IPv6 RA RIPng, OSPFv3, BGP4+ MLD Snooping, IPv6 Multicast VLAN MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Anycast RP, IPv6 ACL, IPv6 QoS |
| QoS | 8 Queues SP, WRR, SWRR, WDRR, SWDRR 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 Time Ranged ACL |
| Security | IEEE 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 | 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 RMOM 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) |

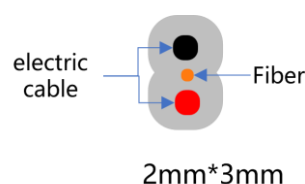
Applications

S5750X-24NF6X-P-SI switch provides 24 x 1G/2.5G SC PoE and 2 x 1G/10G SC optical-electrical hybrid PoE to fiber AP, ideal to Wi-Fi6 and Wi-Fi7 networks.



Note:

- 1、The Optical-electric hybrid cable is an integration of two power lines and one optical fiber. It looks like a cable, so it is called a photoelectric hybrid cable. The power line is the carrier for power transmission between the switch port and the optical AP, and the optical fiber is the carrier for data transmission between the switch port and the optical AP. It breaks through the original 100-meter constraint of pure electrical port data transmission and can achieve nearly 300-meter AP deployment, greatly solving the problem that remote APs cannot be powered conveniently. This power supply mode is also called PoF in the industry.
- 2、In the DCN all-optical network solution, both the POE switch and the optical AP need to have SC Optical-electric hybrid interfaces, and they need to be connected using an Optical-electric hybrid cable (SC interface) before they can be used.



Order Information

| Product | Description |
|--------------------|---|
| S5750X-24NF6X-P-SI | L3 full 2.5G + 10G Switch (24*1G/2.5GBase-X(SC) PoE + 4*1G/10G (SFP+) + 2*1G/10G(SC)), fixed AC power supply, 802.3af/at/bt (the last 4*1G/2.5G(SC) & 2 1G/10G(SC) interfaces support 802.3bt PoE), total 740W PoE output |