




## S5750E(R2) Series L3 10G Fiber Routing Switch

### Product Overview

DCN S5750E series switch is full fiber 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.

| Appearance   | Description  |
|--|--|
| <br>S5750E-16F-SI-D | <ul style="list-style-type: none"><li>● 8 x 100/1000Base-X (SFP) + 4 x GE Combo (RJ45/SFP) + 4 x 10GbE (SFP+)</li><li>● 1 console, 1 USB, 1 RJ45 management port</li><li>● AC + 48VDC power supply</li><li>● Switching capacity: 112Gbps</li><li>● Forwarding rate: 83Mpps</li></ul> |
| <br>S5750E-28F-SI-D | <ul style="list-style-type: none"><li>● 16 x 100/1000Base-X (SFP) + 8x GE Combo(RJ45/SFP) + 4 x 10GE(SFP+)</li><li>● 1 console, 1 USB, 1 RJ45 management port</li><li>● AC + 48VDC power supply</li><li>● Switching capacity: 128Gbps</li><li>● Forwarding rate: 95Mpps</li></ul>    |
| <br>S5750E-52F-SI-D | <ul style="list-style-type: none"><li>● 48 x 100/1000Base-X (SFP) + 4 x 10GbE (SFP+)</li><li>● 1 console, 1 USB, 1 RJ45 management port</li><li>● AC + 48VDC power supply</li><li>● Switching capacity: 176Gbps</li><li>● Forwarding rate: 131Mpps</li></ul>                         |

## Key Features and Highlights

### Performance and Scalability

With high switching capacity, S5750E(R2) series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of S5750E(R2) 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

S5750E(R2) series delivers 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 S5750E(R2) series, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

### Strong Multicast

S5750E(R2) 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; S5750E(R2) 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, S5750E(R2) 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.

S5750E(R2) 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

S5750E(R2) 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, S5750E(R2) series will be the right product to meet this requirement.

## Specifications

| Item                      | S5750E-16F-SI-D  | S5750E-28F-SI-D  | S5750E-52F-SI-D  |
|---------------------------|--|--|--|
| <b>Physical port</b>      | 8 x 100/1000Base-X (SFP) + 4 x GbE Combo (RJ45/SFP) + 4 x 10GbE (SFP+) Auto-MIDX | 16 x 100/1000Base-X (SFP) + 8x GbE Combo (RJ45/SFP) + 4 x 10GE(SFP+) Auto-MIDX | 48 x 100/1000Base-X (SFP) + 4 x 10GbE (SFP+) Auto-MIDX |
| <b>Management port</b>    | 1 x RJ45 Ethernet Management port<br>1x Console port<br>1x USB2.0 interface      |  |  |
| <b>Performance</b>        |  |  |  |
| <b>Switching Capacity</b> | 112Gbps  | 128Gbps  | 176Gbps  |
| <b>Forwarding rate</b>    | 83Mpps   | 95Mpps   | 131Mpps  |
| <b>Jumbo Frame</b>        | 10K  | 10K  | 10K  |
| <b>MAC Address</b>        | 16K  | 16K  | 16K  |
| <b>ARP Table</b>          | 4K   | 4K   | 4K   |

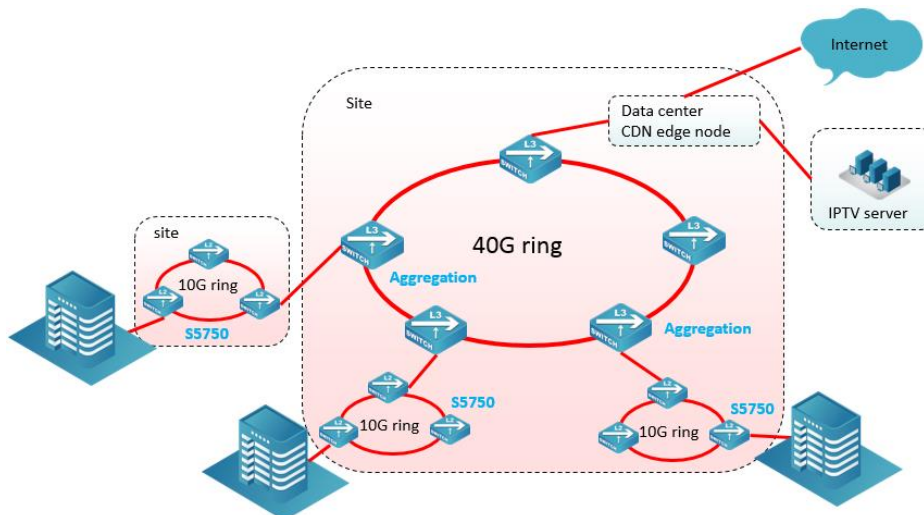
|  |   |   |                                 |  |
|--|---|---|---------------------------------|--|
| <b>Routing Table</b>   | 1K  | 1K  | 1K                              |  |
| <b>ACL Table</b>   | 1K  | 1K  | 1K                              |  |
| <b>Physical</b>  |   |   |                                 |  |
| <b>Dimension (W*H*D)</b>   | 330mm x 44mm x 230mm  | 440mm x 44mm x 240mm  | 440mm x 44mm x 320mm            |  |
| <b>Relative Humidity</b>   | 5%~95%, non-condensing  |   |                                 |  |
| <b>Temperature</b>   | Working 0°C~50°C, storage -40°C~70°C  |   |                                 |  |
| <b>Power Supply</b>  | AC:100~240VAC, 50~60Hz + 48V DC   | AC:100~240VAC, 50~60Hz + 48V DC   | AC:100~240VAC, 50~60Hz + 48V DC |  |
| <b>Power Consumption</b>   | <22W  | <34W  | <60W                            |  |
| <b>Main Features</b>   |   |   |                                 |  |
| <b>L1, L2 Features</b>   | 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<br>LLDP and LLDP-MED<br>UDLD<br>802.3ad LACP, max 128 group trunks with max 8 ports for each trunk<br>LACP load balance<br>ERPS (G.8032)                      |   |                                 |  |
|  | N:1 Port Mirroring<br>RSPAN   |   |                                 |  |
|  | IEEE802.1d(STP)<br>IEEE802.1w(RSTP)<br>IEEE802.1s(MSTP)<br>Root Guard<br>BPDU Guard<br>BPDU Tunnel  |   |                                 |  |
|  | 802.1Q, 4K VLAN<br>MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN<br>QinQ, Flexible QinQ<br>GVRP<br>N:1 VLAN Translation<br>Broadcast / Multicast / Unicast Storm Control |   |                                 |  |
|  | IGMP v1/v2/v3 Snooping and L2 Query<br>ND Snooping<br>MLDv1/v2 Snooping   |   |                                 |  |
|  | Port Security   |   |                                 |  |
|  | Flow Control: HOL, IEEE802.3x<br>Bandwidth Control  |   |                                 |  |
|  | <b>L3 Features</b>  | Static Routing, RIPv1/v2, OSPFv2, BGP4<br>OSPFv3, BGP4+<br>OSPF multiple processes<br>LPM Routing<br>Policy-based routing (PBR) for IPv4 and IPv6<br>VRRP<br>URPF,<br>ECMP<br>BFD |                                 |  |
|  |   | IGMP v1/v2/v3, IGMP Proxy,<br>Static Multicast Route<br>Multicast Receive Control<br>Illegal Multicast Source Detect  |                                 |  |
| ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit<br>Anti ARP Cheat, Anti ARP Scan |   |   |                                 |  |
|  |   |   |                                 |  |

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

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

## Application

S5750E series fiber switches are deployed as Access switch with 10G uplink in FTTH network



## Order Information

| Product                | Description   |
|------------------------|---|
| <b>S5750E-16F-SI-D</b> | 10G Ethernet Routing Switch, 8 x 100/1000Base-X (SFP) + 4 x GE Combo (RJ45/SFP) + 4 x 10GbE (SFP+), AC + 48VDC power supply   |
| <b>S5750E-28F-SI-D</b> | 10G Ethernet Routing Switch, 16 x 100/1000Base-X (SFP) + 8 x GE Combo (RJ45/SFP) + 4 x 10GbE (SFP+), AC + 48V DC power supply |
| <b>S5750E-52F-SI-D</b> | 10G Ethernet Routing Switch, 48 x 100/1000Base-X (SFP) + 4 x 10GbE (SFP+), AC + 48VDC power supply                            |