# S5750E(R2) Dual Stack 10G Ethernet Routing Switch

**S5750E-28X-SI(R2)**

**S5750E-52X-P-SI(R2)**

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## ■ Product Overview

S5750E(R2) series next-generation 10G stackable routing switch has advanced hardware and software architecture design. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with innovative features such as VSF, IEEE 802.3at optional. It is ideal for aggregation or access layer as its high performance, availability and reliability.

## ■ Key Features and Benefits

### ➢ 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 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 virtualized device are greatly enlarged by times under VSF. VSF also simplifies management work for 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 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 great application experience for customer.

### ➢ Easy High Reliability network

MRPP is Multi-layer Ring Protection Protocol, which is DCN's private fast Ethernet ring protocol. Comparing to spanning tree protocol, it has advantages of fast convergence, simple protocol calculation, less 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.

### ➢ Enhanced Security

IEEE 802.1X port-based access control and MAC-based access control ensure all users are authorized before being granted access to the network.

Ingress/Egress Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers information. And for some services are based on time, the product can support time based ACL to match the requirement.

Secure Shell (SSH) encrypts network management information via Telnet providing secure network management.

RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

### ➢ 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 a right product to meet this requirement.

### ➢ Green-Energy

Temperature monitoring, alarming, automatic cooling, energy saving features are realized on S5750E(R2). According to the temperature monitoring, Fan speed can be adjusted or stopped to reduce energy consumption and noise.

## ■ Specification

| Item | S5750E-28X-SI(R2) | S5750E-28X-P-SI(R2) | S5750E-52X-SI(R2) | S5750E-52X-P-SI(R2) |
|------|-------------------|---------------------|-------------------|---------------------|

| Physical port | 24 x 10/100/1000BaseT + 4 x 10GE(SFP+) | 20 x 10/100/1000BaseT + 4 x GE Combo(GT/SFP) + 4 x 10GE(SFP+) | 48 x 10/100/1000BaseT + 4 x 10GE(SFP+) | 48 x 10/100/1000BaseT + 4 x 10GE(SFP+) |
|---|---|---|---|---|
| Management port | 1 x RJ45 Ethernet Management port | | | |
| | 1x Console port | | | |
| | 1x USB2.0 interface | | | |
| Performance | | | | |
| Switching Capacity | 128Gbps | 128Gbps | 176Gbps | 176Gbps |
| Throughput | 95Mpps | 95Mpps | 131Mpps | 131Mpps |
| Jumbo Frame | 10K | 10K | 10K | 10K |
| MAC Address | 16K | 16K | 16K | 16K |
| ARP Table | 4K | 4K | 4K | 512 |
| Routing Table | 1K | 1K | 1K | 512 |
| ACL Table | 1K | 1K | 1K | 512 |
| Physical | | | | |
| Dimension (W*H*D) | 440mm x 44mm x 240mm | 440mm x 44mm x 320mm | 440mm x 44mm x 240mm | 440mm x 44mm x 320mm |
| Relative Humidity | 10%~90% non-condensing, storage 95% | | | |
| Temperature | Working 0°C~50°C, storage -40°C~70°C | | | |
| Power Supply | AC:100~240VAC, 50~60Hz | AC:100~240VAC, 50~60Hz | AC: 100~240VAC, 50~60Hz | AC: 100~240VAC, 50~60Hz; DC:-52V~-57V |
| Power Consumption | <30W | <471W | <50W | <897W |
| PoE | NA | IEEE 802.3af IEEE 802.3at Total PoE power: 370W | NA | 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 ULDP 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk (S5750E-52X-P-SI(R2.0) support max 64 group trunks with max 8 ports for each trunk) LACP load balance | | | |
| | N:1 Port Mirroring RSPAN ERSPAN (S5750E-52X-P-SI(R2.0) doesn't support) | | | |

| | |
|---|---|
| | IEEEE802.1d(STP) |
| | IEEEE802.1w(RSTP) |
| | IEEEE802.1s(MSTP) |
| | Root Guard |
| | BPDU Guard |
| | BPDU Tunnel |
| | 802.1Q, 4K VLAN |
| | MAC VLAN, Vocie 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,OSPFv2,BGP4 |
| | OSPFv3, BGP4+ |
| | OSPF multiple process |
| | 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 (*S5750E-52X-P-SI(R2.0) doesn't support*) |

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|---|---|
| IPv6 | 6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel (S5750E-52X-P-SI(R2) don't support) |
| | 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 ACL, IPv6 QoS |
| QoS | 8 Queues |
| | SP, WDRR, SWDRR |
| | 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 |
| 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 |
| | 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) |
|---|---|

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

## ■ Order Information

| Product | Description |
|---|---|
| S5750E-28X-SI (R2) | 10G Ethernet Routing Switch, 24 x 10/100/1000BaseT + 4 x 10GE(SFP+), 1 fixed AC power supply |
| S5750E-28X-P-SI(R2) | 10G Ethernet Routing Switch, 20 x 10/100/1000BaseT + 4 x GE Combo(GT/SFP) + 4 x 10GE(SFP+), 1 fixed AC power supply. up to 370W for PoE |
| S5750E-52X-SI (R2) | 10G Ethernet Routing Switch, 48 x 10/100/1000BaseT + 4 x 10GE(SFP+), 1 fixed AC power supply |
| S5750E-52X-P-SI (R2) | 10G Ethernet Routing Switch, 48 x 10/100/1000BaseT + 4 x 10GE(SFP+), fixed AC+DC redundant power supply, up to 740W for PoE |
| AOC-SFPX-10M | AOC cable with 2 10G(SFP+) modules, 10m, suitable for SFP+ ports on same model of switch, can be used for VSF |
| DAC-SFPX-3M | DAC cable with 2 10G(SFP+) modules, 3m, suitable for SFP+ ports on same model of switch, can be used for VSF |

## ■ Contact us

For more detail information about DCN product, contact:

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