# DCN Europe

**Switch to a New Generation**

## ETHERNET AGGREGATION SWITCHES
## S5750E SERIES

S5750E-16F-SI-R

S5750E-28F-SI-D
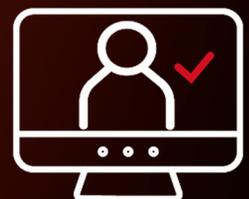
S5750E-52F-SI-R

S5750E-26X-SI

**Network Security**

**Stacking**

**Advanced QoS**

**10/40 Gb**

10Gb and 40Gb Ports

**Features without hiding costs**

## NETWORK SECURITY

- IP Source Guard provides Layer 2 source IP address filtering to prevent spoofing of an unauthorized host uses authorized hosts IP address. This feature uses dynamic DHCP Snooping and a static input of the source IP address.
- The S5750E series support DHCP Snooping which prevent attacks with using an illegal DHCP server by setting trusted ports and unused ports. By enabling DHCP Snooping Binding and DHCP option 82, you can combine modules such as dot1x and ARP DAI or independently implement user access control.
- Access control list (ACL) can be used to restrict access to sensitive network resources by filtering packets and forwarding according to established rules. The user-defined ACL provides more flexible access control for users.
- The S5750E series supports much more L2 security features such as ARP protection, ARP scanning and other ARP and MAC security technologies to protect network security and reliability.

## STACKING

- Virtual Switch Framework (VSF) can connect multiple DCN switches into one logical device, achieving sharing of information boards and data between different switches. By using this functionality, the devices in the stack have increased performance and the number of ports. VSF technology is also characterized by simplified management and greater operational reliability.

## ADVANCED QOS FUNCTIONS

- With 8 queues per port, the S5750E-SI series allows differentiated classification of up to 8 types of traffic. Traffic is determined according to IEEE802.1p, DSCP, IP priority and TCP / UDP port number, ensuring optimal performance of real-time applications such as voice and video.

## 10 GIGABIT AND 40 GIGABIT PORTS

- The S5750E series of aggregation switches offers up to 24x 10 gigabit and 2x 40 gigabit ports that can work as a redundant link working with various ring protection functions, effectively increasing scalability and network performance.
- All SFP + ports support 10 gigabit as well as 1 gigabit transmission.
- All QSFP ports support 4x 10gigabit transmission after unbinding.

## FEATURES WITHOUT HIDING COSTS

- With using switches of the S5750E series you can be sure that the equipment which you are using has all available functionalities without the needs to purchase additional licenses.

| | S5750E 16F-SI-R | S5750E 28F-SI-D | S5750E 52F-SI-R | S5750E 26X-SI |
|---|---|---|---|---|
| **Switch Classification** | | | | |
| Layer 2+ | - | - | - | √ |
| Layer 3 Lite | √ | √ | √ | - |
| **Connectivity** | | | | |
| COMBO (10/100/1000Base-T (RJ45) or 100/1000Base-X (SFP)) | 4 | 8 | - | - |
| 100/1000Base-X (SFP) | 8 | 16 | 48 | - |
| 1000/10GBase-X (SFP+) | 4 | 4 | 4 | 24 |
| 40GBase-X (QSFP) | - | - | - | 2 |
| Management port OOB (10/100Base-T RJ45) | 1 | 1 | 1 | - |
| Management port OOB (10/100/1000Base-T RJ45) | - | - | - | 1 |
| **Performance** | | | | |
| Switch fabric speed | 112 Gb/s | 128 Gb/s | 176 Gb/s | 640 Gb/s |
| Forwarding Rate | 83 Mp/s | 95 Mp/s | 131 Mp/s | 480 Mp/s |
| Packet buffer | 1,5 MB | 1,5 MB | 3 MB (2x1,5 MB) | 1,5 MB |
| Jumbo Frame | 10 K | 10 K | 10 K | 12 K |
| MAC address Table[1] | 16 K | 16 K | 16 K | 32 K |
| Multicast MAC address Table | 4 K | 4 K | 4 K | 4 K |
| ACL Table[2] | 1,4 K | 1,4 K | 1,4 K | 2,7 K (Ingress) 1 K (Egress) |
| Routing Table[3] | 1 K | 1 K | 1 K | 124[4] |
| ARP Table | 4 K | 4 K | 4 K | |
| Number of Vlan Interfaces (IP) | 1 K | 1 K | 1 K | |
| CPU clock | 800 MHz | 800 MHz | 800 MHz | 1,25 GHz |
| Flash memory | 32 MB SPI + 128 MB NAND | 32 MB SPI + 128 MB NAND | 32 MB SPI + 128 MB NAND | 32 MB SPI + 128 MB NAND |
| RAM memory | 512 MB | 512 MB | 512 MB | 512 MB |
| **Resilience and availability** | | | | |
| IEEE 802.1D STP/802.1w RSTP/802.1s MSTP | √ | √ | √ | √ |
| IEEE 802.3ad LACP | √ | √ | √ | √ |
| Virtual Cable Testing | √ | √ | - | - |
| DDM | √ | √ | √ | √ |
| LLDP / LLDP-MED | √ | √ | √ | √ |
| VRRP | √ | √ | √ | √ |
| Loop guard | √ | √ | √ | √ |
| ERPS (ITU-T G.8032) | √ | √ | √ | √ |
| **Traffic control** | | | | |
| 802.1Q VLANs | 4 K | 4 K | 4 K | 4 K |
| Port-based VLAN | √ | √ | √ | √ |
| Protocol-based VLAN | √ | √ | √ | √ |
| IP subnet based VLAN | √ | √ | √ | √ |
| Voice VLAN | √ | √ | √ | √ |
| Mac VLAN | √ | √ | √ | √ |
| Super VLAN | √ | √ | √ | √ |
| LACP algorithm of source/destination IP (load balance) | √ | √ | √ | √ |
| GVRP | √ | √ | √ | √ |
| 802.1ad Vlan Stacking (QinQ) | √ | √ | √ | √ |
| Flexible QinQ | √ | √ | √ | √ |
| **Security** | | | | |
| Layer 2 MAC filtering | √ | √ | √ | √ |
| BPDU Tunnel | √ | √ | √ | √ |
| Login authentication and authorization by RADIUS and TACACS+ | √ | √ | √ | √ |
| TACACS+ accounting/ auditing | √ | √ | √ | √ |
| SSH v1/v2 | √ | √ | √ | √ |
| DHCP/DHCPv6 snooping | √ | √ | √ | √ |
| IP/IPv6 Source Guard | √ | √ | √ | √ |
| Port security | √ | √ | √ | √ |
| IEEE 802.1x port-based / mac-based | √ | √ | √ | √ |
| **Quality of Service** | | | | |
| 802.1p Priority Queues per Port | 8 | 8 | 8 | 8 |
| 802.1p Queuing method | √ | √ | √ | √ |
| Trusted COS/TOS/IP Precedence/DSCP/Port number | √ | √ | √ | √ |
| Broadcast Storm Control | √ | √ | √ | √ |
| Rate Limiting, port based | √ | √ | √ | √ |
| Strict priority | √ | √ | √ | √ |
| Weighted Round Robin | - | - | - | √ |
| Weighted Deficit Round Robin | √ | √ | √ | √ |
| Weighted Random Early Detection | √ | √ | √ | √ |

[1] - MAC address Table shared for unicast and multicast (in 1:1 ratio)

[2] - ACL Table shared for ingress and egress (in 1:1 ratio) − except S5750E-26X-SI

[3] - Routing Table for IPv4 shared with IPv6 (in 4:1 ratio)

[4] - For S5750E-26X-SI routing table is shared with ARP table and Vlan interfaces (in 2:2:1 ratio). Limit for ARP table and Vlan interfaces is 60 entries (in 2:1 ratio).

| | S5750E 16F-SI-R | S5750E 28F-SI-D | S5750E 52F-SI-R | S5750E 26X-SI |
|---|:---:|:---:|:---:|:---:|
| **L2/L3 - Multicast** | | | | |
| Multicast VLAN | √ | √ | √ | √ |
| IGMP v1,v2, v3 | √ | √ | √ | √ |
| IGMP Query | √ | √ | √ | √ |
| IGMP Snooping (v1,v2,v3) | √ | √ | √ | √ |
| IGMP Snooping Fast Leave (v2,v3) | √ | √ | √ | √ |
| PIM-DM/SM/SSM | √ | √ | √ | - |
| Anycast RP | √ | √ | √ | - |
| IPv6 MLD v1/v2 Snooping | √ | √ | √ | √ |
| **Routing** | | | | |
| Static Route IPv4 / IPv6 | √ | √ | √ | √ |
| RIP v1,v2 / RIPng | √ | √ | √ | |
| OSPF v2 / OSPF v3 | √ | √ | √ | - |
| BGP / BGP4+ | √ | √ | √ | |
| **Layer 3 IPv6** | | | | |
| IPv4/IPv6 Dual Protocol Stack | √ | √ | √ | - |
| IPv6 address | √ | √ | √ | - |
| IPv6 Tunneling | √ | √ | √ | - |
| **Manageability** | | | | |
| Console Port RS-232 (RJ45) | √ | √ | √ | √ |
| GUI (Web) | √ | √ | √ | √ |
| Telnet | √ | √ | √ | √ |
| SNMP v1/v2c/v3 | √ | √ | √ | √ |
| TFTP/FTP | √ | √ | √ | √ |
| Configuration backup and restore | √ | √ | √ | √ |
| Multilevel CLI | √ | √ | √ | √ |
| DNS Client | √ | √ | √ | √ |
| DHCP Client/Relay/Server | √ | √ | √ | √ |
| DHCP option 43/60/82 | √ | √ | √ | √ |
| DHCPv6 option 37/38 | √ | √ | √ | √ |
| DHCPv6 Relay/Server | √ | √ | √ | √ |
| SNTP / NTP | √ | √ | √ | √ |
| sFlow | √ | √ | √ | √ |
| RSPAN | √ | √ | √ | √ |
| ERSPAN | √ | √ | √ | - |
| Cluster | √ | √ | √ | √ |
| Stack (VSF) | √ | √ | √ | √ |
| IEEE 802.3ah EFM | √ | √ | √ | √ |
| IEEE 802.1ag CFM | √ | √ | √ | √ |
| **MIB** | | | | |
| RFC1066 - TCP/IP-based MIB | √ | √ | √ | √ |
| RFC1213, 1157 - SNMPv2c/v3 MIB | √ | √ | √ | √ |
| RFC1493 - bridge MIB | √ | √ | √ | √ |
| RFC2674 - bridge MIB extension | √ | √ | √ | √ |
| RFC1643 - ethernet MIB | √ | √ | √ | √ |
| RFC1757 - RMON group 1,2,3,9 | √ | √ | √ | √ |
| RFC2925 - Remote Management MIB | √ | √ | √ | √ |
| RFC2233 - SMIv2 MIB | √ | √ | √ | √ |
| **Physical** | | | | |
| Dimensions (Width x Height x Depth) | 330 mm x 44 mm x 230 mm | 440 mm x 44 mm x 240 mm | 440 mm x 44 mm x 320 mm | 440 mm x 44 mm x 318 mm |
| Operating Temperature | 0º C ~ 50 ºC | 0 ºC ~ 50 ºC | 0 ºC ~ 50 ºC | 0 ºC ~ 50 ºC |
| Working humidity | 10% - 90% (no condensing) | 10% - 90% (no condensing) | 10% - 90% (no condensing) | 10% - 90% (no condensing) |
| **Electrical** | | | | |
| Power Supply | 230 V AC | 230 V AC | 230 V AC | 230 V AC |
| Redundant Power Supply | 12 V DC, RPS | 48 V DC, RPS | 12 V DC, RPS | 48 V DC, RPS |
| Power Consumption | ≤ 22 W | ≤ 34 W | ≤ 80 W | ≤ 70 W |