

# S5750E-26X-SI L2 Dual Stack 40G Intelligent Fiber Switch Datasheet



S5750E-26X-SI

## ■ Overview

S5750E-26 X - SI switch is new generation of intelligent aggregation and access switches designed by DCN (Digital China Networks) for carrier and MAN networks. S5750E-26 X-SI provides 24 10GbE (SFP+) and 2 40GbE (QSFP) physical ports and redundant power supplies, designed for data center 10G server high-density access scenario and general network 10G convergence scenario relied on telecom grade design features of high reliability, redundancy, high density. It can provide high-performance, easy management and low-cost solutions for data center networks and general networks based on dual link redundancy backup, advanced green environmental protection technology and high bandwidth up to 40G.

## ■ Main Features

### ➤ Performance and Scalability

- The 10 Gigabit Ethernet connectivity of S5750E-26X-SI 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).
- S5750E-26X-SI supports built-in redundant AC and DC power supplies for different environment applications.

### ➤ Full Optical Port

- S5750E-26X-SI supports abundant optical connection ports to construct full optical network and increases the performance of networks.

### ➤ Easy high reliability network

- S5750E-26X-SI supports 24 10GbE (SFP+) and 2 40GbE(QSFP) as uplink ports, which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of network.

- Virtual Switch Framework (VSF) could virtualized multiple DCN switches into one logical device,

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achieves 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 provides simplified management work for network administrator and more reliability.

- **G.8032** provides sub-50ms protection and recovery switching for Ethernet traffic in a carrier ring topology. S5750E-26X-SI supports G.8032 v2 and can be deployed in a variety of complex network topologies including single ring, tangent ring, intersecting rings, double rings and other home networking.
- **Multi-process MSTP**. When a new access ring can be implemented through creating a new process of MSTP, the new ring does not affect the existing traffic. And each process may run different spanning tree protocol.
- **DCN EMVTE** technology (Enhanced Multi-VLAN subnet Traffic Engineering) is a multi-link backup and load balancing solution based on multiple VLAN subnets for dual homing network. It can achieve faster switching and convergence of the uplink through ULPP (Uplink Protection Protocol) and ULSM (Uplink State Monitor) protocol so that network performance is guaranteed.

#### ➤ **Comprehensive QoS**

- With 8 queues per port, S5750E-26X-SI enables 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-26X-SI also supports Bi-directional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources.

#### ➤ **Enhanced Security**

- S5750E-26X-SI provides a variety of security mechanisms like SYN Flood, Land, ICMP Flood attack prevention and other DOS class technology, BPDU Guard and Root Guard which avoid accidental topology loops and prevent illegal edge devices become root to cause unnecessary flapping.
- **IEEE 802.1X** port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.
- 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.
- S5750E-26X-SI support **DHCP snooping**, which prevents DHCP attacks and illegal DHCP SERVER by setting trust ports and untrust ports. With DHCP Snooping binding and option82 enabled, it can combine modules like dot1x and ARP, or implement user-access-control independently.
- S5750E-26X-SI supports much more L2 security features such as **ARP guard**, **Anti-ARP scanning**,

and other ARP and **MAC Security** technology to protect network security and reliability.

- Secure Shell (SSH) encrypts network management information via Telnet providing secure network management.
- RADIUS/TACACS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

### ➤ **Simple and Flexible Operation and Maintenance**

- Full Ethernet **OAM** technology (IEEE802.3ah/802.1ag), VCT, DDM (Digital Diagnostic Monitoring) and other features achieve rapid detection of the network failures; reduce operation and maintenance difficulty.
- ERSPAN (Encapsulated Remote Switched Port Analyzer) technology mirrors traffic through the GRE tunnel technology which simplifies the configuration, helps network administrators to manage remote devices conveniently.

### ➤ **High adaptability VLAN Features**

- S5750E-26X-SI supports 802.1Q and port based VLAN as well as MAC based VLAN, Voice VLAN and Protocol VLAN.
- Abundant QinQ technology including **Normal QinQ** and **Flexible QinQ**, gives users maximum freedom to configure QinQ policy.
- **N:1 VLAN Translation** feature can translate multiple VLAN tags in the frames from access ports into one specified VLAN Tag. It provides a strong technical support for QoS policy convergence.

### ➤ **Abundant Multicast Features**

- S5750E-26X-SI also supports **MVR** (Multicast VLAN Register), selectively allows traffic to cross between different VLANs for bandwidth and security reasons. With MVR Trunk function, which could associate multicast VLAN to trunk port, S5750E-26X-SI combines the VLAN data into the same link, saving lots of resources for users.
- S5750E-26X-SI could prevent multicast traffic from flooding via IGMP Snooping, while multicast traffic is only forwarded to ports associated to multicast devices.

### ➤ **Green Energy**

- With **Innovative port-LED Shut-off** function, the user can automatically set the switch port-LED UP or DOWN at a specified time period according to their needs to achieve functional, energy-saving correct results.
- Full account of low noise requirements of the environment, S5750E-28X-SI use **Smart Fan** strategies to control fan speed according to real-time temperature monitoring system which can effectively

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reduce speed, extend fan life and reduce noise pollution.

## ■ Specifications

Item	S5750E-26X-SI
Management Port	1 Console port
Ports	24x10GbE (SFP+) + 2x40GbE (QSFP) (each 40GbE(QSFP) can be divided 4 10GbE (SFP+) )
<b>Performance</b>	
Switching Capacity	640Gbps
Forwarding Rate	480Mpps
MAC ADDRESS	32K
Jumbo Frame	12K
ACL Table	3K (ingress) + 1K (egress)
Queues per port	8
VLAN TABLE	4K
<b>Physical</b>	
Dimension(WxHxD)	440mm x 43.6mm x 318mm
Power Input	AC: 100~240VAC, 50~60Hz DC: Input -60V ~ -40V
Power Consumption	<70W
Temperature	Working 0°C~50°C, Storage -40°C~70°C
Relative Humidity	10%~90%,non-condensing
EMC safety	CE, RoHS
<b>Main Features</b>	
Forwarding	Storage and Forwarding
VLAN	Port-based VLAN IEEE802.1Q private VLAN Protocol VLAN Voice VLAN MAC VLAN Normal QinQ, Flexible QinQ VLAN Translation
DHCP	IPv4/IPv6 DHCP Client,IPv4/IPv6 DHCP Relay Option 82 IPv4/IPv6 DHCP Snooping,IPv4/IPv6 DHCP Server

Item		S5750E-26X-SI
Reliability	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP Root Guard, BPDU Guard, BPDU Forwarding Multi-Process MSTP
	LACP	128 groups per device/8 ports per group Load balance
	L2 Ring Protection	MRPP ITU-T G.8032 Loopback Detection Fast Link
	Multi-link Backup	Enhanced Multi-VLAN subnet Traffic Engineering (ULPP+ULSM)
	VSF	Virtual Switch Framework
Security		IP ACL, MAC ACL, MAC-IP ACL, User-Defined ACL Time Range ACL VLAN ACL Storm Control based on packets and bytes Port Security, MAC Limit based on VLAN and Port Anti-ARP-Spoofing , Anti-ARP-Scan, ARP Binding ND Snooping DAI IEEE 802.1x Authentication, Authorization, Accounting Radius, TACACS+
Multicast		IGMP v1/v2/v3 snooping, IGMP Fast leave
		MVR
		MLD v1/v2 snooping
		IPv4/IPv6 DCSCM(D)
QoS		8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, IPv6 Flow Label Policing Based on Port and VLAN Single Rate Three Colors, Dual Rates Three Colors for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling

Item	S5750E-26X-SI
Maintenance and Operation Management	XModem/TFTP/FTP CLI, Telnet, Console Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow OAM EFM; OAM CFM Dying GASP DDM ULDP(like Cisco UDLD) LLDP/LLDP MED
Green Energy	Auto Fan Speed Control, Temperature Alarm LED Shut-off

## ■ Ordering information

Product	Description
S5750E-26X-SI	L2 40G Ethernet Switch with 24 10GbE (SFP+) ports ,2 40GbE(QSFP) ,100-240VAC + -48VDC Power Input
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
DAC-QSFP-5M	DAC cable with 2 40G(QSFP) modules, 5m, suitable for QSFP ports on same model of switch, can be used for VSF

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## ■ Contact us

For more detail information about DCN product, contact:

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