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
S5750E-16F-SI-D	• 8 x 100/1000Base-X (SFP) + 4 x GE Combo (RJ45/SFP) + 4 x 10GbE (SFP+) • 1 console, 1 USB, 1 RJ45 management port • AC + 48VDC power supply • Switching capacity: 112Gbps • Forwarding rate: 83Mpps
S5750E-28F-SI-D	• 16 x 100/1000Base-X (SFP) + 8x GE Combo(RJ45/SFP) + 4 x 10GE(SFP+) • 1 console, 1 USB, 1 RJ45 management port • AC + 48VDC power supply • Switching capacity: 128Gbps • Forwarding rate: 95Mpps
S5750E-52F-SI-D	• 48 x 100/1000Base-X (SFP) + 4 x 10GbE (SFP+) • 1 console, 1 USB, 1 RJ45 management port • AC + 48VDC power supply • Switching capacity: 176Gbps • Forwarding rate: 131Mpps

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
Physical port	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
Management port	1 x RJ45 Ethernet Management port		
	1x Console port		
	1x USB2.0 interface		
Performance			
Switching Capacity	112Gbps	128Gbps	176Gbps
Forwarding rate	83Mpps	95Mpps	131Mpps
Jumbo Frame	10K	10K	10K
MAC Address	16K	16K	16K
ARP Table	4K	4K	4K

Routing Table	1K	1K	1K
ACL Table	1K	1K	1K
Physical			
Dimension (W*H*D)	330mm x 44mm x 230mm	440mm x 44mm x 240mm	440mm x 44mm x 320mm
Relative Humidity	5%~95%, non-condensing		
Temperature	Working 0°C~50°C, storage -40°C~70°C		
Power Supply	AC:100~240VAC, 50~60Hz + 48V DC	AC:100~240VAC, 50~60Hz + 48V DC	AC:100~240VAC, 50~60Hz + 48V DC
Power Consumption	<22W	<34W	<60W
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 UDLD 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		
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel		
	802.1Q, 4K VLAN MAC VLAN, Voice 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 processes 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
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel 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 Anycast RP, IPv6 ACL, IPv6 QoS
QoS	8 Queues SWRR, SP, WRR, 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 ACL rules can be configured to port, VLAN
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 RMON 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 a future upgrade or are under development

Application

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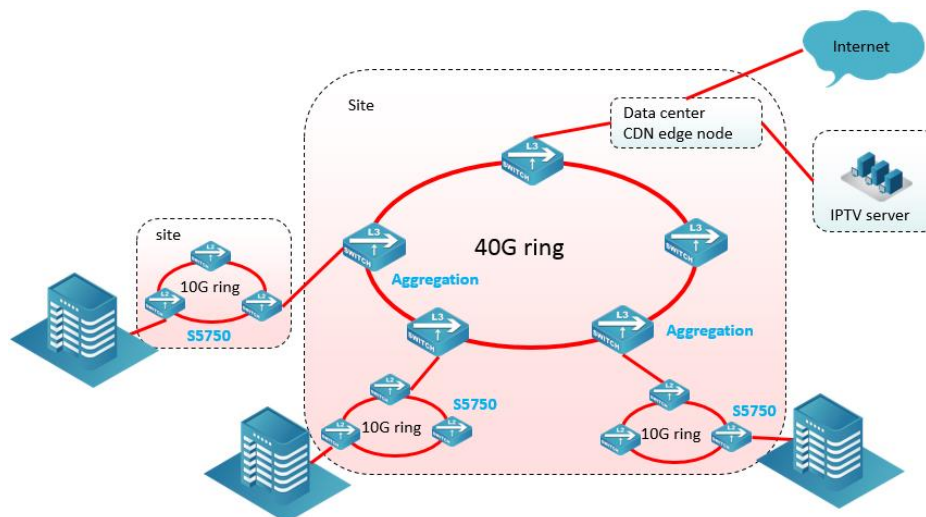
Order Information

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