S5710 Series

Layer3 10G Ethernet Switch

| Overview

The S5710 series switch is a layer 3 Ethernet switch, which meet the needs of cost-effective Gigabit access and 10 Gigabit uplink for enterprise networks and operator customers. S5710 uses a high-performance low-power network processor, provides Gigabit line-speed forwarding performance, supports green Ethernet line sleep capability, has the lowest power consumption of the same-level equipment in the industry, supports powerful QoS and ACL functions, and supports IP+MAC+ Security features such as port binding support service flow classification and packet priority marking. Support static data packet sampling, SFLOW function, support multi-port mirroring analysis function, support static and flexible QinQ function, support Ethernet OAM 802.3ag (CFM), 802.3ah (EFM), support strategy-based IPV4/6 unicast routing, support Flexible forwarding strategy

S5710 switch can meet the specific priority needs of enterprise network video, audio high-priority data and other specific data traffic QOS and multicast functions; it is well adapted to the current enterprise network needs to use VLAN isolation, and the data is strictly prioritized Typical applications of guarantees. The Gigabit and 10 Gigabit ports of S5710 switch can provide affordable, high-density, strong scalability, and simple management aggregation solutions for enterprise networks, IP networks, and campus network.

| Model Select

S5710-28TX

- 24* 10/100/1000M Base-T RJ45 port
- 4* SFP/10G SFP+ port
- AC input: 100~240V,50/60Hz
- 19"1U (440×210×44mm)

S5710-28TXP

- 24* 10/100/1000M Base-T PoE RJ45 port
- 4* SFP/10G SFP+ port
- PoE budget: 400W (802.3af/at)
- AC input: 100~240V,50/60Hz
- 19"1U (440*270*44mm)

S5710-54TX

- 48* 100/1000M Base-T RJ45 port
  6* SFP/10G SFP+ port
- AC input: 100~240V,50/60Hz
- 19"1U (440*290*44mm)

Features

10 Gigabit Aggregation

The S5710 series supports high-density Gigabit ports and 10 Gigabit SFP+ ports, Providing targeted solutions for large-flow data exchange in data centers, simplifying the network structure and reducing network maintenance costs.

Carrier-level high availability

S5710 series switch not only supports the traditional STP/RSTP/MSTP spanning tree protocol, but also supports the G.8032 international standard ERPS protocol issued by ITU-T. This standard can realize 50ms fast loop recovery under Ethernet ring network. One switch can connect to multiple aggregation switches through multiple links, significantly improving the reliability of access devices.

Layer3 routing and enhanced multi-service

Support static route

Support dynamic route such as RIP, OSPF,BGP, IS-IS

Support IPV4/IPV6 dual protocol stack，Support RIPng、OSPFv3

Support DHCP Server and DHCP Relay,L2-Tunnel

Support Ethernet OAM protocol such as CFM、EFM

Uninterrupted PoE power supply

When the device restarts, the PoE switch will not interrupt the power supply to the connected camera, VoIP phone and other powered devices, ensuring that the powered device will not lose power during the restart of the switch, and achieve interruption of PoE power supply.

Hardware based ACL control

The hardware based ACL processing mechanism is adopted to ensure the control requirements of Gigabit high-speed

forwarding; it supports ACL access control from the second to the seventh layer, which can be based on the source and destination MAC addresses, source and destination IP addresses, UDP/TCP port numbers, and IP addresses. The protocol type and other information classify the data flow, and set the access control rules according to the data classification. You can set permit or deny, and then apply the rules to VLANs or physical ports; support the global ACL function, which expands the number of effective ACL entries, which is convenient The use and maintenance of customers.

Enhanced security and authentication technologies

Provides multiple security policies such as user authority/identity authentication, port security, port speed limit, port monitoring, address filtering, loopback detection, 802.1X authentication etc., to provide multiple protection mechanisms for user access and network security. It has a very good security function design, supports user security policy-based SNMP V3, MAC+IP+VLAN binding, 802.1X authentication and other security strategies, supports anti-network storm attacks, anti-DOS/DDOS attacks, anti-ARP attacks, Security technologies such as anti-network protocol message attacks can effectively prevent attacks and viruses, and are more suitable for large-scale, multi-service, and complex traffic access networks

Full QoS policy and Q-in-Q for campus or carrier network

S5710 fully implements the DIFFSERV model, provides up to 8 QoS queues, supports DSCP/TOS/802.1P and other QoS methods, SP, SRR, WRR, WFQ and hybrid scheduling and other priority queue scheduling algorithms, which can achieve port speed limit QoS functions such as traffic shaping to meet customer network requirements for data processing priority; support port trust, configurable trust CoS, DSCP, IP priority, port priority, and modify the DSCP and CoS values of data packets; according to the port , VLAN, DSCP, IP priority, ACL table to classify the traffic, modify the DSCP and IP priority of the data packet, and specify different bandwidths to provide different service quality for voice/data/video transmission in the same network. Support QinQ function, encapsulate the user's private network VLAN tag in the public network VLAN tag, so that the message will pass through the backbone network with two layers of VLAN tag to realize the intercommunication of the user's private network.

Specification

Model	S5710-28TX	S5710-28TXP	S5710-54TX
Port	24*10/100/1000M Base-T RJ45, 4*1000M Base-X SFP/10GE SFP+,	24*10/100/1000M Base-T PoE port, 4*1000M Base-X SFP/10GE SFP+,	48*10/100/1000M Base-T RJ45 6*1000M Base-X SFP/10GE SFP+,
Chipset	RTL9301	RTL9301	RTL9311
Switching capacity	128Gbps	128Gbps	216Gbps

forwarding rate	95Mbps	95Mbps	160Mbps
MAC	16K	16K	32K
Multicast	1K	1K	4K
ARP table	2K	2K	8K
Route table	512	512	12K
PoE budget	N/A	400W(af/at)	N/A
Memory	Memory：512MB, storage：32MB		
Power supply	AC： 100 ~ 240V 47/63Hz;		
Power consumption	≤22W	≤450W	≤30W
Dimensions（WxDxH）	440X210X44mm	440X270X44mm	440×290×44mm
Temperature	Working Temperature： -10℃ ~ 55℃ Storge temperature： -40℃ ~ 70℃		
Humidity	Operating humidity: 10% ~ 95% (non-condensing) Storage humidity: 10% ~ 95% (non-condensing)		

Software	Specification	S5710-28TX（P）	S5710-54TX
Ethernet	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)	Support	Support
	Ethernet interface operating rates	Support	Support
	Jumbo Frame	Support	Support
	Port enable/disable	Support	Support
	Flow-control tx/rx	Support	Support
	Port based storm-control	Support	Support
	Unknow-unicast/unknow-multicast/broadcast storm-control	Support	Support
	Port-isolate	Support	Support
	Cut-through	Support	Support
VLAN	Access/Trunk/Hybrid	Support	Support
	4K VLAN	Support	Support
	Default VLAN	Support	Support
	VLAN Classification(port based/mac based/ip based/protocal based)	Support	Support
	Basic QinQ	Support	Support

	Flexible QinQ	Support	Support
	VLAN Swap	Support	Support
MAC	Automatic learning and aging of MAC addresses	Support	Support
	Hardware Learning	Support	Support
	Static and dynamic　MAC address entries	Support	Support
	blackhole MAC	Support	Support
LAG	Static-LAG & LACP	Support	Support
	LAG load balance（SIP/DIP/SMAC/DMAC）	Support	Support
STP	Spanning-Tree Protocol	Support	Support
	Rapid Spanning-Tree Protocol	Support	Support
	Multi-instance Spanning-Tree Protocol	Support	Support
	BPDU Filter/Guard	Support	Support
	Root Guard	Support	Support
	Loop Guard	Support	Support
ERPS	Single Ring	Support	Support
	Sub Ring	Support	Support
Loopback Detect	Loopback-detection	Support	Support
Layer2 Multicast	IGMPv1/v2/v3 Snooping	Support	Support
	Fast leave	Support	Support
	Static IGMP snooping group	Support	Support
	MVR（Multicast VLAN Registration）	Support	Support
ARP	Static and dynamic ARP entries	Support	Support
	Aging of ARP entries	Support	Support
	Gratuitous ARP	Support	Support
	basic ARP-Proxy	Support	Support
	local ARP-Proxy	Support	Support
IPv4 Unicast Routing	IPv4 Static Routes	Support	Support
	uRPF check	Support	Support
	RIPv1/v2	N/A	Support
	OSPFv2	N/A	Support
	IS-IS	N/A	Support
	BGP	N/A	Support
	ICMP redirect	Support	Support
	ICMP unreachables	Support	Support
	ECMP	Support	Support

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IPv4 Multicast Routing	IGMPv1/v2/v3	Support	Support
	IGMP-Proxy	Support	Support
	IGMP SSM Mapping	Support	Support
	PIM-SM	N/A	Support
	PIM-SSM	N/A	Support
	PIM-DM	N/A	Support
IPv6 Basic Protocol	ICMPv6	N/A	Support
	NDP	N/A	Support
	PMTU	N/A	Support
IPv6 Unicast Routing	IPv6 Static Routes	N/A	Support
	RIPng	N/A	Support
	BGP4+	N/A	Support
	OSPFv3	N/A	Support
	IS-IS	N/A	Support
IPv6 Multicast Routing	MLD v1/v2	N/A	Support
	MLD v1/v2 Snooping	N/A	Support
BFD	BFD for OSPFv2	N/A	Support
VRRP	VRRP	Support	Support
	Track for VRRP	Support	Support
Smart Link	FlexLink	Support	Support
	Monitorlink	Support	Support
EFM	Auto detection	Support	Support
	Network fault detetion	Support	Support
	Network fault handle	Support	Support
	remote loopback	Support	Support
CFM	Hardware CCM detect	Support	Support
	MAC Ping	Support	Support
	MAC Trace	Support	Support
Y.1731	Latency and jitter measure	Support	Support
QoS	Traffic classification based on COS/DSCP (simple classification)	Support	Support
	Traffic classification based on ACL (complex classification)	Support	Support
	Traffic classification based on inner header of the tunnel packets	Support	Support
	Queue scheduling	Support	Support

	Remark the priority fields(COS/DSCP) of the packet based on ACL	Support	Support
	Flow redirection	Support	Support
	Flow mirror	Support	Support
	Traffic policing based on direction(in/out) of Port	Support	Support
	Traffic policing based on direction(in/out) of VLAN	Support	Support
	Traffic policing based on direction(in/out) of flow	Support	Support
	Traffic policing based on direction(in/out) of aggregated flow	Support	Support
	Queue based traffic shaping	Support	Support
	Port based traffic shaping	Support	Support
	SP（Strict Priority）scheduling	Support	Support
	WRR（Weighted Round Robin）scheduling	Support	Support
	SP + WRR mixed scheduling	Support	Support
	Packet counts and bytes statistics based on traffic classification	Support	Support
	Packet counts and bytes statistics based on the color after traffic policing	Support	Support
	Forwarded and discarded packet counts and bytes statistics	Support	Support
System Security	SSHv1/v2	Support	Support
	RADIUS	Support	Support
	TACACS+	Support	Support
	Authentication	Support	Support
	Accounting	Support	Support
	Port based dot1x	Support	Support
	MAC based dot1x	Support	Support
	MAC/IP ACL	Support	Support
	Basic Mode ACL	Support	Support
	Port/VLAN/L4-Port ACL	Support	Support
	Time Range	Support	Support
	ARP Inspection	Support	Support
	IP Source Guard	Support	Support
	Limitation on MAC address learning on interface	Support	Support
	Limitation on MAC address learning on VLAN	Support	Support
	Rate limit	Support	Support

	CPU Traffic Limit	Support	Support
	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood)	Support	Support
	CLI/WEB/SNMP/Telnet/SSH filtering	Support	Support
Network Management	DHCP Server	Support	Support
	DHCP Relay	Support	Support
	DHCP Snooping	Support	Support
	DHCP Option60	Support	Support
	DHCP Option82	Support	Support
	RMON	Support	Support
	RFC3176 sFlow	Support	Support
	SNTP（Simple Network Time Protocol）	Support	Support
	LLDP	Support	Support
Terminal Services	Configurations through CLI (Command Line Interface)	Support	Support
	Vty Terminal service	Support	Support
	Console Terminal service	Support	Support
Configuration Management	Inband management interface and configuration	Support	Support
	Outband management interface and configuration	Support	Support
	privileged user proirity and privileged commands	Support	Support
	Network management based on SNMPv1/v2c/v3	Support	Support
	Public and private MIB	Support	Support
	Public and private Trap	Support	Support
	Configuration and management based on WEB	Support	Support
	Restore factory default configuration	Support	Support
File System	File system	Support	Support
	Upload and download files through FTP or TFTP	Support	Support
	Upload and download files through Xmodem	Support	Support
Debugging And Maintenance	per-module Debug features	Support	Support
	ICMP Debug	Support	Support
	CPU usage display and alarm	Support	Support
	Memory usage display and alarm	Support	Support
	Device temperature、PSU、FAN、status display and alarm	Support	Support
	User operation logs	Support	Support
	Management of logs, alarms, and debugging information	Support	Support

	VCT（Virtual Cable Test）	Support	Support
	Detailed Diagnostic-information collection	Support	Support
	Manual reboot	Support	Support
	Schedule Reboot	Support	Support
	Reboot Information logging	Support	Support
	Ping	Support	Support
	IPv6 Ping	Support	Support
	Traceroute	Support	Support
	Port mirror	Support	Support
	Flow mirror	Support	Support
	Remote mirror	Support	Support
	Multi-destination mirror（m:n）	Support	Support
	To CPU/From CPU packets statistics	Support	Support
	port loopback	Support	Support
	hardware loopback（internal/external）	Support	Support
	Time configuration	Support	Support
	Timezone	Support	Support
Upgrade	upgrade with the local image file	Support	Support
	upgrade with the remote TFTP server	Support	Support
	Online upgrade Uboot	Support	Support

Application
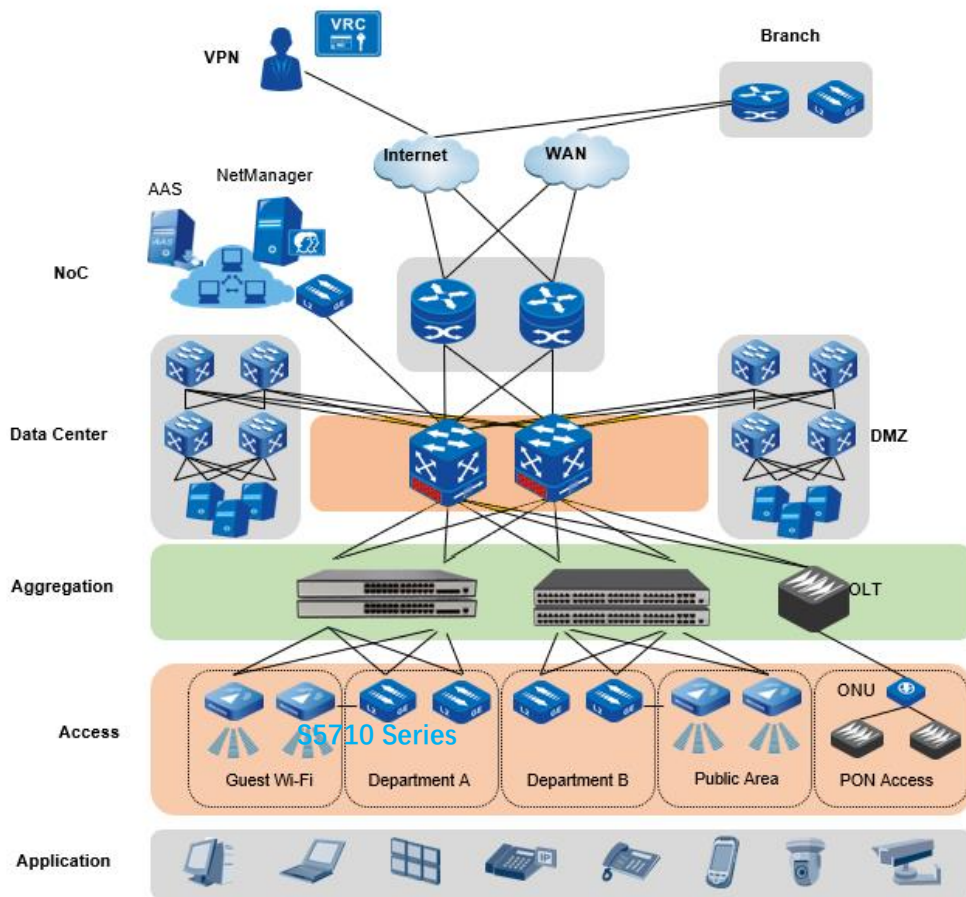
Ordering Information

Ethernet Switch	
S5710-28TX	24*10/100/1000M RJ45 port, 4* 10G SFP+ port, single AC Power supply
S5710-28TXP	24*10/100/1000M RJ45 PoE port, 4* 10G SFP+ port, single AC Power supply. PoE budget: 400W(af/at)
S5710-54TX	48*10/100/1000M RJ45 PoE port, 6*10G SFP+ port, single AC Power supply
S5710-54TXP	48*10/100/1000M RJ45 PoE port, 6*10G SFP+ port, single AC Power supply PoE budget: 780W(af/at)