

S5710 Series

Layer3 Managed 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

Model Select



S5710-12TX

- 8* 10/100/1000M Base-T RJ45 port
- 4* SFP/10G SFP+ port



S5710-28TX

- 24* 10/100/1000M Base-T RJ45 port
- 4* SFP/10G SFP+ port



S5710-28TX-P

- 24* 10/100/1000M Base-T PoE RJ45 port
- 4* SFP/10G SFP+ port
- PoE budget: 400W (802.3af/at)



S5710-54TX

- 48* 100/1000M Base-T RJ45 port
- 6* SFP/10G SFP+ port

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 routing

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	S5710-12TX	S5710-28TX	S5710-28TX-P	S5710-54TX
Port	8*1G RJ45 4 *10G SFP+	24*1G RJ45 4 *10G SFP+	24*1G RJ45/PoE 4 *10G SFP+	48*1G RJ45 6 *10G SFP+
Chipset	RTL9301	RTL9301	RTL9301	RTL9311
Switching capacity	128Gbps	128Gbps	128Gbps	216Gbps
forwarding rate	95Mbps	95Mbps	95Mbps	160Mbps
MAC	16K	16K	16K	32K
Multicast	1K	1K	1K	4K
ARP table	2K	2K	2K	8K
Routing table	512	512	512	12K
PoE budget	N/A	N/A	400W(af/at)	N/A
Memory	Memory: 512MB, storage: 32MB			
Power supply	AC: 100 ~ 240V 47/63Hz;			
Power consumption	≤22W	≤22W	≤450W	≤30W
Dimensions (WxDxH)	260X210X44mm	440X210X44mm	440X270X44mm	440×290×44mm
Temperature	Working Temperature: -10°C ~ 55°C Storage temperature: -40°C ~ 70°C			
Humidity	Operating humidity: 10% ~ 95% (non-condensing) Storage humidity: 10% ~ 95% (non-condensing)			

Software	Specification	S5710-12TX /28TX (P)	S5710-54TX
Ethernet	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)	•	•
	Ethernet interface operating rates	•	•
	Jumbo Frame	•	•
	Port enable/disable	•	•
	Flow-control tx/rx	•	•
	Port based storm-control	•	•
	Unknow-unicast/unknow-multicast/broadcast storm-control	•	•
	Port-isolate	•	•
	Cut-through	•	•
VLAN	Access/Trunk/Hybrid	•	•
	4K VLAN	•	•

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

	IGMP SSM Mapping	●	●
	PIM-SM	N/A	●
	PIM-SSM	N/A	●
	PIM-DM	N/A	●
IPv6 Basic Protocol	ICMPv6	N/A	●
	NDP	N/A	●
	PMTU	N/A	●
IPv6 Unicast Routing	IPv6 Static Routes	●	●
	RIPng	●	●
	BGP4+	N/A	●
	OSPFv3	●	●
	IS-IS	N/A	●
IPv6 Multicast Routing	MLD v1/v2	N/A	●
	MLD v1/v2 Snooping	N/A	●
BFD	BFD for OSPFv2	N/A	●
Stacking	Virtual Stacking Frame	●	●
	Max support 8 stacking units	●	●
VRRP	VRRP	●	●
	Track for VRRP	●	●
Smart Link	FlexLink	●	●
	Monitorlink	●	●
EFM	Auto detection	●	●
	Network fault detetion	●	●
	Network fault handle	●	●
	remote loopback	●	●
CFM	Hardware CCM detect	●	●
	MAC Ping	●	●
	MAC Trace	●	●
Y.1731	Latency and jitter measure	●	●
QoS	Traffic classification based on COS/DSCP (simple classification)	●	●
	Traffic classification based on ACL (complex classification)	●	●
	Traffic classification based on inner header of the tunnel packets	●	●
	Queue scheduling	●	●
	Remark the priority fields(COS/DSCP) of the packet based on ACL	●	●
	Flow redirection	●	●
	Flow mirror	●	●
	Traffic policing based on direction(in/out) of Port	●	●

	Traffic policing based on direction(in/out) of VLAN	•	•
	Traffic policing based on direction(in/out) of flow	•	•
	Traffic policing based on direction(in/out) of aggregated flow	•	•
	Queue based traffic shaping	•	•
	Port based traffic shaping	•	•
	SP (Strict Priority) scheduling	•	•
	WRR (Weighted Round Robin) scheduling	•	•
	SP + WRR mixed scheduling	•	•
	Packet counts and bytes statistics based on traffic classification	•	•
	Packet counts and bytes statistics based on the color after traffic policing	•	•
	Forwarded and discarded packet counts and bytes statistics	•	•
System Security	SSHv1/v2	•	•
	RADIUS	•	•
	TACACS+	•	•
	Authentication	•	•
	Accounting	•	•
	Port based dot1x	•	•
	MAC based dot1x	•	•
	MAC/IP ACL	•	•
	Basic Mode ACL	•	•
	Port/VLAN/L4-Port ACL	•	•
	Time Range	•	•
	ARP Inspection	•	•
	IP Source Guard	•	•
	Limitation on MAC address learning on interface	•	•
	Limitation on MAC address learning on VLAN	•	•
	Rate limit	•	•
	CPU Traffic Limit	•	•
Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood)	•	•	
CLI/WEB/SNMP/Telnet/SSH filtering	•	•	
Network Management	DHCP Server	•	•
	DHCP Relay	•	•
	DHCP Snooping	•	•
	DHCP Option60	•	•
	DHCP Option82	•	•
	RMON	•	•

	RFC3176 sFlow	•	•
	SNTP (Simple Network Time Protocol)	•	•
	LLDP	•	•
Terminal Services	Configurations through CLI (Command Line Interface)	•	•
	Vty Terminal service	•	•
	Console Terminal service	•	•
Configuration Management	Inband management interface and configuration	•	•
	Outband management interface and configuration	•	•
	privileged user proirity and privileged commands	•	•
	Network management based on SNMPv1/v2c/v3	•	•
	Public and private MIB	•	•
	Public and private Trap	•	•
	Configuration and management based on WEB	•	•
	Restore factory default configuration	•	•
File System	File system	•	•
	Upload and download files through FTP or TFTP	•	•
	Upload and download files through Xmodem	•	•
Debugging And Maintenance	per-module Debug features	•	•
	ICMP Debug	•	•
	CPU usage display and alarm	•	•
	Memory usage display and alarm	•	•
	Device temperature、PSU、FAN、status display and alarm	•	•
	User operation logs	•	•
	Management of logs, alarms, and debugging information	•	•
	VCT (Virtual Cable Test)	•	•
	Detailed Diagnostic-information collection	•	•
	Manual reboot	•	•
	Schedule Reboot	•	•
	Reboot Information logging	•	•
	Ping	•	•
	IPv6 Ping	•	•
	Traceroute	•	•
	Port mirror	•	•
	Flow mirror	•	•
	Remote mirror	•	•
	Multi-destination mirror (m:n)	•	•
	To CPU/From CPU packets statistics	•	•
port loopback	•	•	
hardware loopback (internal/external)	•	•	

	Time configuration	●	●
	Timezone	●	●
Upgrade	upgrade with the local image file	●	●
	upgrade with the remote TFTP server	●	●
	Online upgrade Uboot	●	●

Ordering Information

Ethernet Switch	
S5710-12TX	Layer3 8-port Ethernet access switch, 8* 10/100/1000M Base-T RJ45 port and 4* SFP/10G SFP+ port, 1* Fixed AC: 100~240V, 11"1U Rack-mount
S5710-28TX	Layer3 24-port Ethernet access switch, 24* 10/100/1000M Base-T RJ45 port and 4* SFP/10G SFP+ port, 1* Fixed AC: 100~240V, 19"1U Rack-mount
S5710-28TX-P	Layer3 24-port Ethernet PoE switch, 24* 10/100/1000M Base-T RJ45 PoE port and 4* SFP/10G SFP+ port, IEEE 802.3af/at, PoE budget: 400W, 1* Fixed AC: 100~240V, 19"1U Rack-mount
S5710-54TX	Layer3 48-port Ethernet access switch, 48* 10/100/1000M Base-T RJ45 port and 6* SFP/10G SFP+ port, 1* Fixed AC: 100~240V, 19"1U Rack-mount
Optic Fiber Module	
SFP-RJ45	1000M SFP module, RJ45 port
SFP-M-LC-R5	1000M SFP module, multi-mode, 500M, 850nm, LC
SFP-S-LC-20	1000M SFP module, single-mode, 20km, 1310nm, LC
SFP-S-LC-40	1000M SFP module, single-mode, 40km, 1310nm, LC
SFP-S-LC-80	1000M SFP module, single-mode, 80km, 1550nm, LC
SFP+-M-LC-R3	10G SFP+ modules. multi-mode, 300M, 850nm, LC

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