

# SS5720-12M2H2X

## L3 12-port 2.5G Switch with 10G uplink

### Product Overview

SS5720-12M2H2X is a Layer3 2.5 Gigabit Ethernet switch designed to meet the needs of cost-effective 2.5G access and 10 Gigabit uplink for enterprise networks and telecom operators. It owns a high-performance, low-power network processor, providing Gigabit line-speed forwarding performance. Also supports green Ethernet line sleep capability, and makes it one of the lowest power-consuming devices in its class. The switch includes robust QoS and ACL functionalities and supports security features like IP+MAC+port binding for service flow classification and packet priority marking.

Additional features include static packet sampling, SFLOW capabilities, multi-port mirroring analysis, and support for both static and flexible QinQ. It also supports Ethernet OAM protocols 802.3ag (CFM) and 802.3ah (EFM), policy-based IPv4/6 unicast routing, and flexible forwarding strategies.

### Product Interface



- SS5720-12M2H2X**
- 12\* 100/1000M/2.5G Base-T RJ45 port
  - 2\* 1G/2.5G/5G/10G Base-T RJ45 port
  - 2\*10G SFP+
  - 250×210×44mm

## Key Features

### High Density 2.5G Gigabit Access

- Supports high-density 2.5 Gigabit Ethernet ports
- Providing large scale 2.5G access point, 2.5G PCIe card (PC & server) and NAS storage station etc. access

### Carrier-level High Availability

- Supports STP/RSTP/MSTP spanning tree protocol
- Supports the G.8032 international standard ERPS protocol issued by ITU-T
- Realize 50ms fast loop recovery under Ethernet ring network.

### Layer3 Routing & 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

### ACL control

- Support ACL access control from the second to the seventh layer 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.
- Set permit or deny, and then apply the rules to VLANs or physical ports.
- Support the global ACL function, expands the number of effective ACL entries

### 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.,
- Provide multiple protection mechanisms for user access and network security.
- 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

### QoS & QinQ

- 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.
- 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

### Simple and easy-to-use network management

#### function

- Support CLI based on RS232 serial port, Telnet and SSHv2
- Support WEB-based configure operation management, support SNMP V1/V2/V3
- Support remote upgrade or equipment through FTP and TFTP

# Hardware Specification

Attributes	SS5720-12M2H2X
<b>Ethernet Port</b>	12*2.5GBase-T RJ45; 2*1G/2.5G/5G/10G RJ45
<b>Optic Port</b>	2*10G SFP+
<b>Chipset</b>	Realtek9302C
<b>Switching Capacity</b>	140Gbps
<b>Forwarding Rate</b>	104.16Mpps
<b>MAC</b>	16K
<b>Multicast</b>	1K
<b>ARP Table</b>	2K
<b>Route</b>	6k
<b>DRAM/Flash</b>	DRAM: 256MB; Flash:32MB
<b>Power Supply</b>	AC: 100 ~ 240V
<b>Power Consumption</b>	≤30W
<b>Dimensions</b>	250×210×44mm
<b>Working Temperature</b>	-20°C~ 55°C

# Software Specification

Attributes	SS5720-12M2H2X
<b>MAC Address Table</b>	Supports manual addition and deletion of MAC address tables Supports port shutdown MAC address learning Support port MAC address number control Support port MAC address filtering function
<b>VLAN</b>	Supports 4K VLAN 802.1Q Supports VLANs based on ports, MACs and protocols Support Access/Trunk/Hybrid Support QinQ
<b>Spanning Tree</b>	Support STP/RSTP/MSTP Supports remote loop detection
<b>Ports</b>	Supports bi-directional bandwidth control Supports static and LACP dynamic aggregation port aggregation Supports multi-port mirroring Supports port storm suppression Supports 12K Jumbo ultra-long frame forwarding
<b>User Security</b>	Supports Anti-ARP-spoofing spoofing protection. Supports automatic suppression of Anti-ARP-flooding attacks. Supports IP Source Guard to automatically create IP+MAC+Port+VLAN binding tables. Supports Port Isolation hardware to isolate messages between ports. Supports MAC address binding to ports and port MAC address filtering Supports IEEE 802.1x and AAA/Radius for user authentication
<b>Switch Security</b>	Support for SSHv2 Secure Shell Support SNMP v3 encryption management Supports Security IP's Telnet login and password mechanism.
<b>Network Security</b>	Supports one-click binding based on dynamic ARP tables Supports manual binding of IP address, VLAN ID, MAC address and port parameters Supports L2-L7 ACL flow filtering Supports port broadcast/multicast message suppression and automatic shutdown of dangerous ports Supports DHCP Option82 and PPPoE+ tagging to upload user physical location information
<b>ACL</b>	Support for standard and extended ACLs Supports Time Range-based ACL policies. Provides flow classification and flow definition based on source/destination MAC address, VLAN, 802.1p, ToS, DiffServ, source/destination IP (IPv4/IPv6) address, TCP/UDP port

	<p>number, protocol type and other IP message header information</p> <p>Supports 80-byte header filtering for IP messages from L2 to L7.</p>
<b>QoS</b>	<p>Supports COS/DSCP-based traffic classification</p> <p>Supports rate limiting of incoming and outgoing messages on ports or custom streams.</p> <p>Supports message mirroring and message redirection for ports or customized streams</p> <p>Supports priority marking of ports or customized streams, and provides Remark capability for 802.1P and DSCP priorities.</p> <p>Supports advanced queue scheduling based on ports or customized streams, supports 8 priority queues per port/stream, and provides various queue scheduling algorithms such as SP, WRR, SP+WRR, etc.</p> <p>Supports traffic supervision based on VLAN direction (in/out)</p> <p>Supports traffic supervision based on aggregated flow direction (inbound/outbound)</p> <p>Supports queue-based traffic shaping</p> <p>Supports port-based traffic shaping</p> <p>Supports SP strict priority scheduling</p> <p>Supports WRR (weighted round robin) scheduling</p> <p>Support SP + WRR hybrid scheduling</p> <p>Support for IPv4-v6 QoS (qc)</p>
<b>Multicast</b>	<p>Support for IGMPv1/v2/v3 Snooping</p> <p>Supports IGMP Filter multicast filtering</p> <p>Supports IGMP Fast leave fast leave multicast groups</p> <p>Support for IGMP Proxy</p>
<b>ARP</b>	<p>Supports ARP table entry aging</p> <p>Support for ARP Proxy</p>
<b>IPv4</b>	<p>Supports static IPv4 routes</p> <p>Ping, Traceroute are supported,</p> <p>VRRP support</p> <p>Support OSPF, RIP, PIM, BGP and other protocols</p> <p>Support ICMP redirect, ICMP unreachable</p>
<b>IPv6</b>	<p>Supports static IPv6 routing</p> <p>ICMPv6 support</p> <p>Support for Neighbor Discover</p>
<b>Loop Protection</b>	<p>Supports enhanced Ethernet ring protocol</p> <p>Support Loopback-detection port loopback detection</p>
<b>Link Protection</b>	<p>Supports FlexLink link backup</p> <p>Supports RSTP/MSTP link healing hardware acceleration capability</p> <p>Supports LACP dynamic link aggregation</p>

<p><b>Maintenance</b></p>	<p>Supports Telnet-based real-time port traffic, utilization, and incoming and outgoing packet statistics</p> <p>Supports LLDP neighbor device discovery protocol</p> <p>Supports Ethernet OAM 802.3ah EFM and 802.1ag CFM</p> <p>Support for data logging and RFC 3164 BSD syslog Protocol</p> <p>Ping and Traceroute support</p>
<p><b>Management</b></p>	<p>Supports Command Line Interface (CLI), Console port, Telnet, SSH and WEB configuration management</p> <p>Supports Virtual Cable Testing (VCT)</p> <p>Support SNMP V1/V2c/V3 management</p> <p>Support for Sntp protocol</p> <p>Support for hierarchical user rights</p> <p>Support user RADIUS remote authentication</p> <p>Support for user Tacacs+ remote authentication</p>

## Purchase Info

Product Name	Product Description
<p><b>SS5720-12M2H2X</b></p>	<p>12*100/1000M/2.5G Base-T RJ45 port; 2*1G/2.5G/5G/10G Base-T RJ45 port; 2*10G SFP+; Single AC Power Supply</p>