S5700 Series Ethernet Switches

Product Description

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About This Document

Intended Audience

This document is intended for network engineers responsible for network design and deployment. You should understand your network well, including the network topology and service requirements.

Privacy Statement

The switch provides the mirroring function for network monitoring and fault management, during which communication data may be collected. Huawei will not collect or save user communication information independently. Huawei recommends that this function be used in accordance with applicable laws and regulations. You should take adequate measures to ensure that users' communications are fully protected when the content is used and saved.

The switch provides the NetStream function for network traffic statistics collection and advertisement, during which data of users may be accessed. You should take adequate measures, in compliance with the laws of the countries concerned and the user privacy policies of your company, to ensure that user data is fully protected.

Disclaimer

This document is designed as a reference for you to configure your devices. Its contents, including web pages, command line input and output, are based on laboratory conditions. It provides instructions for general scenarios, but does not cover all use cases of all product models. The examples given may differ from your use case due to differences in software versions, models, and configuration files. When configuring your device, alter the configuration depending on your use case.

The specifications provided in this document are tested in lab environment (for example, the tested device has been installed with a certain type of boards or only one protocol is run on the device). Results may differ from the listed specifications when you attempt to obtain the maximum values with multiple functions enabled on the device.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
⚠ DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
⚠ NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
📖 NOTE	Calls attention to important information, best practices and tips. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Contents

1 Product Overview

About This Chapter

1.1 Introduction

Huawei S5700 series Ethernet switches (S5700 for short) are next-generation energy-saving switches designed to provide high-bandwidth access and Ethernet multi-service aggregation. Based on cutting-edge hardware and Huawei Versatile Routing Platform (VRP) software, the S5700 provides a large switching capacity, high reliability (double power slots and hardware Ethernet OAM), and high-density GE ports to accommodate 10 Gbit/s upstream transmissions. It also supports Energy Efficient Ethernet (EEE) and iStack. The S5700 can be used in extensive enterprise network scenarios. For example, it can function as an access or aggregation switch on a campus network, a gigabit access switch in an Internet data center (IDC), or a desktop switch to provide 1000 Mbit/s access for terminals.

The S5700 is available in a lite (LI) series, a standard (SI) series, an enhanced (EI) series, and a hyper (HI) series.

1.2 Product Characteristics

Enabling networks to be more agile for services

The high-speed Ethernet Network Processor (ENP) embedded in the S5720-HI and S5730-HI is tailored for Ethernet. The chip's flexible packet processing and traffic control capabilities can meet current and future service requirements, helping build a highly scalable network.

In addition to capabilities of traditional switches, the S5720-HI and S5730-HI provide fully programmable open interfaces and supports user-defined forwarding behavior. Enterprises can use the open interfaces to develop new protocols and functions independently or jointly with equipment vendors to build campus networks meeting their own needs.

The ENP has a fully programmable architecture, on which enterprises can define their own forwarding models, forwarding behavior, and lookup algorithms. Microcode programmability

makes it possible to provide new services within six months, without the need of replacing the hardware. In contrast, traditional ASIC chips use a fixed forwarding architecture and follow a fixed forwarding process. For this reason, new services cannot be provisioned until new hardware is developed to support the services one to three years later.

Delivering abundant services more agilely

The S5720-HI and S5730-HI integrate the AC function, so customers do not need to buy independent AC devices or hardware components.

With the unified user management function, the S5720-HI and S5730-HI authenticate both wired and wireless users, ensuring a consistent user experience no matter whether they are connected to the network through wired or wireless access devices. The unified user management function supports various authentication methods, including 802.1x, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. These functions visualize user and service management and boost the transformation from device-centric management to user-centric management.

The S5720-HI and S5730-HI provide excellent quality of service (QoS) capabilities and supports queue scheduling and congestion control algorithms. Additionally, it adopts innovative priority queuing and multi-level scheduling mechanisms to implement fine-grained scheduling of data flows, meeting service quality requirements of different user terminals and services.

Providing fine granular network management more agilely

The S5720-HI and S5730-HI use the Packet Conservation Algorithm for Internet (iPCA) technology that changes the traditional method of using simulated traffic for fault location. iPCA technology can monitor network quality for any service flow anywhere and anytime, without extra costs. It can detect temporary service interruptions in a very short time and can identify faulty ports accurately. This cutting-edge fault detection technology turns "extensive management" to "fine granular management."

The S5720-HI and S5730-HI support Two-Way Active Measurement Protocol (TWAMP) to accurately check any IP link and obtain the entire network's IP performance. This protocol eliminates the need of using a dedicated probe or a proprietary protocol.

The S5720-HI and S5730-HI support SVF and functions as a parent switch. With this virtualization technology, a physical network with the "Small-sized core/aggregation switches + Access switches + APs" structure can be virtualized into a "super switch", offering the industry's simplest network management solution.

With the Easy Deploy function, the S5720-HI and S5730-HI manage access switches in a similar way an AC manages APs. In deployment, access switches and APs can go online with zero-touch configuration. In the Easy Deploy solution, the Commander collects topology information about the connected clients and stores the clients' startup information based on the topology. Clients can be replaced with zero-touch configuration. The Commander can deliver configurations and scripts to clients in batches and query the delivery results. In addition, the Commander can collect and display information about power consumption on the entire network.

Various Port Combinations

The S5700-EI, S5710-EI, and S5720-EI, S5730-SI, and S5730S-EI support various extension cards that provide high-density GE/10GE/40GE uplink ports. This flexibility in port

combinations ensures that customer's bandwidth expansion requirements can be met in a cost effective way.

- The S5710-EI has four fixed 10GE SFP+ ports. With different extended subcards installed, the S5710-EI can provide different combinations of ports, such as 64xGE + 4x10GE, 48xGE + 8x10GE, and 56xGE + 6x10GE.

- The S5720EI with subcards has four fixed 10GE SFP+ ports. With different extended subcards installed, the S5720EI with subcards can provide different combinations of ports, such as 4x10GE optical ports, 6x10GE optical ports, and 4x10GE optical ports + 2x10GE electrical ports.

- The S5730-SI/S5730S-EI has four fixed 10GE SFP+ ports and supports extended subcards with 4x40GE optical ports. With these subcards installed, the S5730-SI/ S5730S-EI can provide different combinations of ports, such as 48xGE + 4x10GE + 4x40GE and 48xGE + 16GE (each 40GE interface being split into four 10GE interfaces) + 4x10GE.

Intelligent Stack

The S5700 supports intelligent stack (iStack). This technology combines multiple switches into a logical switch.

Member switches in a stack back up each other to improve device reliability and establish inter-device link aggregation to improve link reliability. iStack provides high network scalability and allows for flexible expansion of ports, bandwidth, and processing capacity by simply adding member switches to the stack. iStack also simplifies device configuration and management by virtualizing multiple physical switches into one logical device. You can log in to any member switch to manage all the stack member switches.

The S5720-SI, S5720S-SI, S5720I-SI, S5720-EI, S5720-LI, and S5720S-LI switches support stack connections using electrical ports.

Innovative AHM Energy Saving Technologies

The S5700-LI series (except the S5700-52X-LI-48CS-AC, S5700-28P-LI-BAT and S5700-28P-LI-24S-BAT) and S5720-LI/S5720S-LI series smart energy-saving switches reduce power consumption without compromising the system performance or user experience. The S5700-LI series uses innovative energy-saving technologies including energy efficient Ethernet (EEE), port power detection, dynamic CPU frequency adjustment, and device sleeping. These technologies reduce power consumption by adjusting power depending on the Up/Down link states, presence/absence of optical modules, shutdown and undo shutdown operations on ports, and peak/off-peak hours. The S5700-LI series is the industry's first switch series that supports complete device sleeping, and it provides three energy saving modes to adapt to different usage scenarios: standard, basic, and deep.

Comprehensive VPN Technologies

The S5700 supports the multi-VPN-instance CE (MCE) function, which allows users in different VPNs to connect to the same switch and isolates users through multi-instance routing. These users connect to a PE device through the same physical uplink port, which reduces the network deployment costs.

The S5710-EI, S5700-HI, S5710-EI, S5700-HI, S5710-HI, S5720-EI, S5720-HI, and S5730-HI support Multiprotocol Label Switching (MPLS) QoS, MPLS traffic engineering (TE), virtual leased line (VLL), virtual private LAN service (VPLS), and Layer 3 virtual private

network (L3VPN). They provide high-quality private line access services for enterprises and are cost-effective fixed MPLS switches.

Easy Operations and Maintenance

The S5700 supports EasyDeploy, USB-based deployment, batch remote upgrade and is a plug-and-play product. These functions facilitate device deployment, upgrade, service provisioning, and other management and maintenance operations. They also greatly reduce operations and maintenance costs. The S5700 can be managed and maintained using Simple Network Management Protocol (SNMP) V1, V2c, and V3, command line interface (CLI), web system, Telnet, or Secure Shell (SSH) V2.0. Additionally, it supports remote network monitoring (RMON), multiple log hosts, interface traffic statistics collection, and network quality analysis that help in network consolidation and reconstruction.

The S5700 can use the GARP VLAN Registration Protocol (GVRP) to dynamically distribute, register, and propagate VLAN attributes, reducing manual configuration workload and ensuring correct VLAN configuration. Moreover, the S5700 supports the MUX VLAN function, which involves a principal VLAN and multiple subordinate VLANs. Subordinate VLANs are classified as group and separate VLANs. Ports in the principal VLAN can communicate with ports in subordinate VLANs. Ports in a subordinate group VLAN can communicate with each other, whereas ports in a subordinate separate VLAN can communicate only with ports in the principal VLAN.

Excellent Network Traffic Analysis

The S5700 supports NetStream and can function as a NetStream data exporter. It periodically collects data traffic statistics, encapsulates the statistics in standard V5, V8, or V9 packets, and sends the packets to the NetStream data collector depending on how NetStream is configured. The collected statistics are then processed to dynamically generate reports, analyze traffic attributes, and generate alarms on abnormal traffic. NetStream helps you optimize network structure and adjust resource deployment on-demand.

The S5700 also supports sFlow. Using a method defined in the sFlow standard, the switch samples traffic passing through it and sends sampled traffic to the collector in real time. The collected traffic statistics are used to generate statistical reports, helping enterprises maintain their networks.

Flexible Ethernet Networking

In addition to traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the S5700 supports Huawei-developed Smart Ethernet Protection (SEP) technology and the latest Ethernet Ring Protection Switching (ERPS) standard.

SEP is a ring protection protocol specific to the Ethernet link layer, and applies to various ring network topologies, such as open ring, closed ring, and cascading ring. This protocol is reliable and easy to maintain.

ERPS is defined in ITU-T G.8032. It provides millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.

The S5700 supports Smart Link and Virtual Router Redundancy Protocol (VRRP) for uplink backup. One S5700 switch can connect to multiple aggregation switches with multiple links, significantly improving access device reliability. In addition, the S5700 provides multiple

connection fault detection mechanisms, including Ethernet OAM (IEEE 802.3ah/ 802.1ag /ITU Y.1731) and Bidirectional Forwarding Detection (BFD).

Diversified Security Control

The S5700 supports MAC address and 802.1X authentication and can dynamically deliver policies (VLAN, QoS, and ACL) for users.

The S5700 provides a series of mechanisms to defend against:

- DoS attacks: including SYN flood, Land, Smurf, and ICMP flood
- User-targeted attacks: including bogus DHCP server attacks, IP/MAC address spoofing, DHCP request flood, and attack packets with variable DHCP CHADDR values

The S5700 collects and maintains information about access users, such as IP addresses, MAC addresses, IP address leases, VLAN IDs, and access interfaces in a DHCP snooping binding table. With this information, it can defend against DHCP attacks on the network. You can specify trusted and untrusted interfaces to ensure that users connect only to the authorized DHCP server.

The S5700 supports strict ARP learning. This feature prevents ARP spoofing attackers from exhausting ARP entries so that users can connect to the Internet normally.

Mature IPv6 Technologies

The S5700 uses the Versatile Routing Platform (VRP) and supports IPv4/IPv6 dual-stack, IPv6 routing protocols (RIPng, OSPFv3, BGP4+, and IS-IS for IPv6), and IPv6 over IPv4 tunnels (manual, 6-to-4, and ISATAP tunnels). With these IPv6 features, the S5700 can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, supporting a smooth evolution from IPv4 to IPv6.

Innovative Built-in Battery

The S5700-LI-BAT series (S5700-28P-LI-BAT and S5700-28P-LI-24S-BAT) is the industry's first switch model that has a built-in lithium battery as a backup power supply. It ensures uninterrupted services when power failures occur frequently at the access layer. The S5700-LI-BAT has the following advantages:

- Once a mains power outage occurs, the battery can power the switch to ensure nonstop services.
- The switch saves space in an equipment room and is easy to install.
- Intelligent power management ensures a long standby time.
- Battery LAN switches on the entire network can be managed centrally using a web system, facilitating network operations and maintenance. As the battery lifetime is predictable, there are no costs on unnecessary battery replacement.
- The built-in battery provides alarm and protection functions. It will trigger overtemperature protection when the temperature is beyond the operating temperature range.

Ground-Free Design

The S5720-12TP-LI-AC uses a ground-free design. Only the 220 V power module in the switch needs to be grounded. This design facilitates switch deployment in a place where grounding is difficult, such as corridor.

Suitable for outdoor extreme environment

The S5720I-SI supports broad operating temperature range. So the switch can be working in the outdoor cabinet in the very cold and very hot environments. The typical scenario is the access of the camera for outdoor video surveillance and ETTx.

The S5720I-SI supports ±6kV lightning protection, suitable for outdoor extreme environment.

High-Density Access and Increased Bandwidth on CSFP Ports

The S5700 CSFP models support CSFP modules on downlink ports. Each downlink port with a CSFP GE optical module and a pair of fibers can provide 2 Gbit/s bidirectional bandwidth, which is twice the bandwidth of a standard SFP optical module. The 24 CSFP downlink ports can provide 48 Gbit/s bidirectional bandwidth, allowing for high-density access (equivalent to 48 standard SFP ports) and saving costs of fibers and optical modules.

Cloud-based Management

Huawei provides the Cloud Managed Network Solution based on a public cloud. The S5720-SI/S5720S-SI (since V200R010C00), S5720-LI (since V200R011C00), S5720S-LI (since V200R011C10), and S5720I-SI (since V200R012C00), can be managed by a cloud management platform. In the Huawei Cloud Managed Network solution, cloud-managed switches are plug-and-play. They automatically connect to the cloud management platform and use bidirectional certificate authentication to ensure management channel security. The cloud-managed switches provide the NETCONF and YANG interfaces, through which the cloud management platform delivers configurations to them. In addition, remote maintenance and fault diagnosis can be performed on the cloud-managed switches using the cloud management platform.

VXLAN features

The S5720-HI and S5730-HI support VXLAN Layer 2 and Layer 3 gateway functions, which can be configured using NetConf/Yang. Based on this feature, multiple service networks or tenant networks can be deployed on the same physical network. These service or tenant networks are isolated from each other. In this way, one network is used for multiple purposes, enabling data transmission of different services or customers, reducing the costs of repeated network construction, and improving network resource usage efficiency.

PoE++ power supply

The S5720-SI, S5720I-SI, S5720-LI, S5730-HI, S5730-SI, and S5730S-EI series PoE switches provide a maximum of 90 W, 60 W , or 30 W PoE output power on a single interface, and can provide power for high-power terminals such as APs and surveillance cameras. This solves the problem of power supply in specific scenarios.

Open Programmability System (OPS)

The S5710-X-LI, S5720-LI, S5720S-LI, S5720-SI, S5720S-SI, S5720I-SI, S5720-EI, S5720-HI, S5730-HI, S5730-SI, and S5730S-EI provide open interfaces, and customers can make executable paython scripts based on specified events to implement intelligent device management, lowering O&M costs and simplifying operations.

Related Content

Support Community

● **Introduction to Huawei Fixed Switches**

Videos

● **Huawei S5720HI Agile Switch Allows Services to Change On Demand**
● **Huawei Next-Generation Enhanced Gigabit Ethernet Switch S5720-EI**
● **S5720-SI Series Layer 3 Gigabit Ethernet Switches**
● **Huawei S5720-LI Series Gigabit Access Switches**
● **Huawei UPoE+ Switch Delivers High-Power PoE**

2 Usage Scenarios

About This Chapter

2.1 Large-Scale Enterprise Campus Network

As shown in **Figure 2-1**, S5700 switches are deployed at the access layer of a campus network to build a high-performance and highly reliable enterprise network.

Figure 2-1 S5700 in a large-scale enterprise campus network
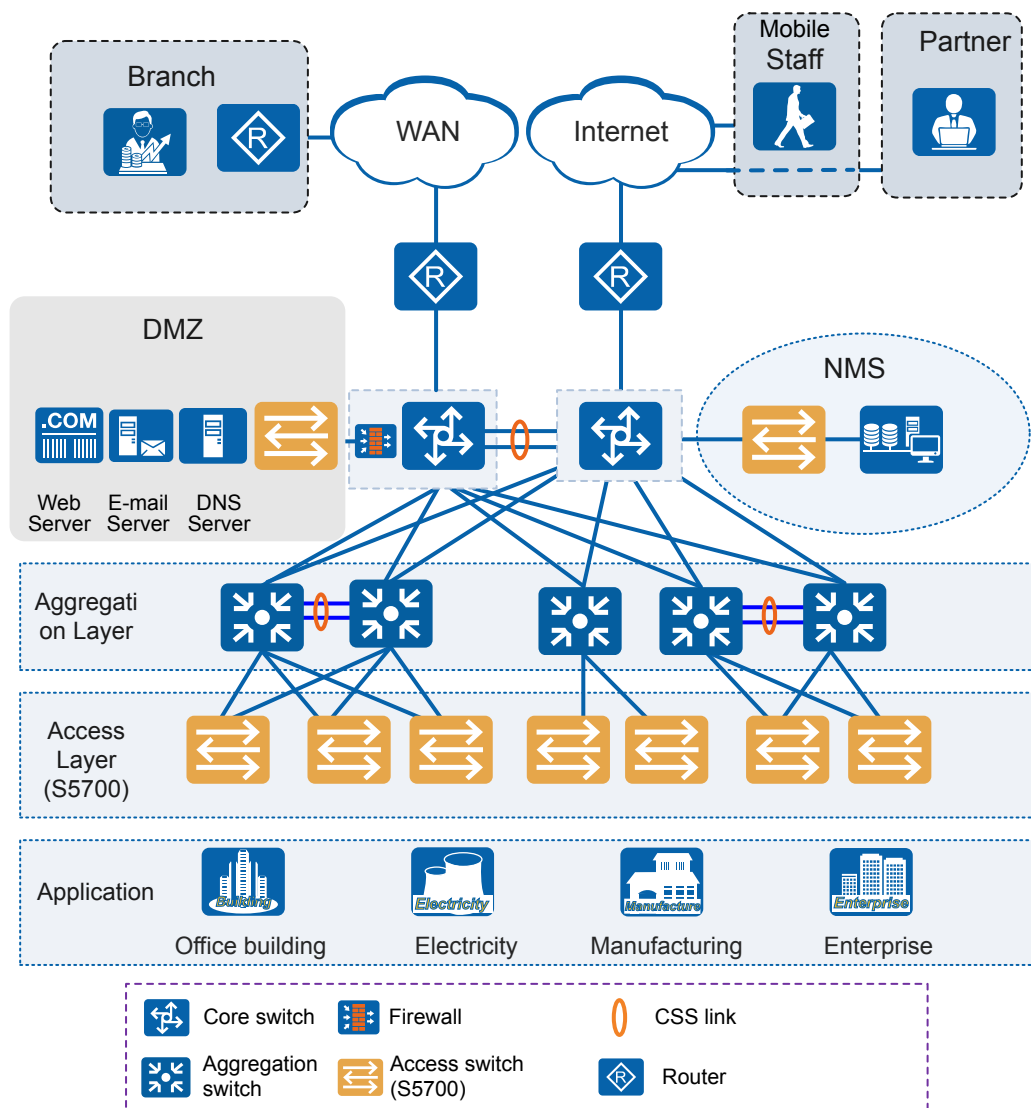
The S5700 switches provide various terminal security management features, and support PoE, voice VLAN, and QoS functions. They can provide gigabit-to-the-desktop access capability in the campus.

The S5700 switches ensure secure access of user terminals using security features such as ARP security, IP security, IP source guard, and access control policies (NAC and ACLs).

The S5700 switches support the Eth-Trunk feature and Link Aggregation Control Protocol (LACP) to provide multiple links for access of servers, improving link bandwidth and achieving link backup.

The Easy-Operation and USB-based deployment features facilitate deployment and management of the switches.

2.2 Small- or Medium-scale Enterprise Campus Network

As shown in **Figure 2-2**, the S5700 switches are deployed at the aggregation layer of a campus network to build a high-performance, multi-service, and highly reliable enterprise network.

Figure 2-2 S5700 in a small- or medium-scale enterprise campus network
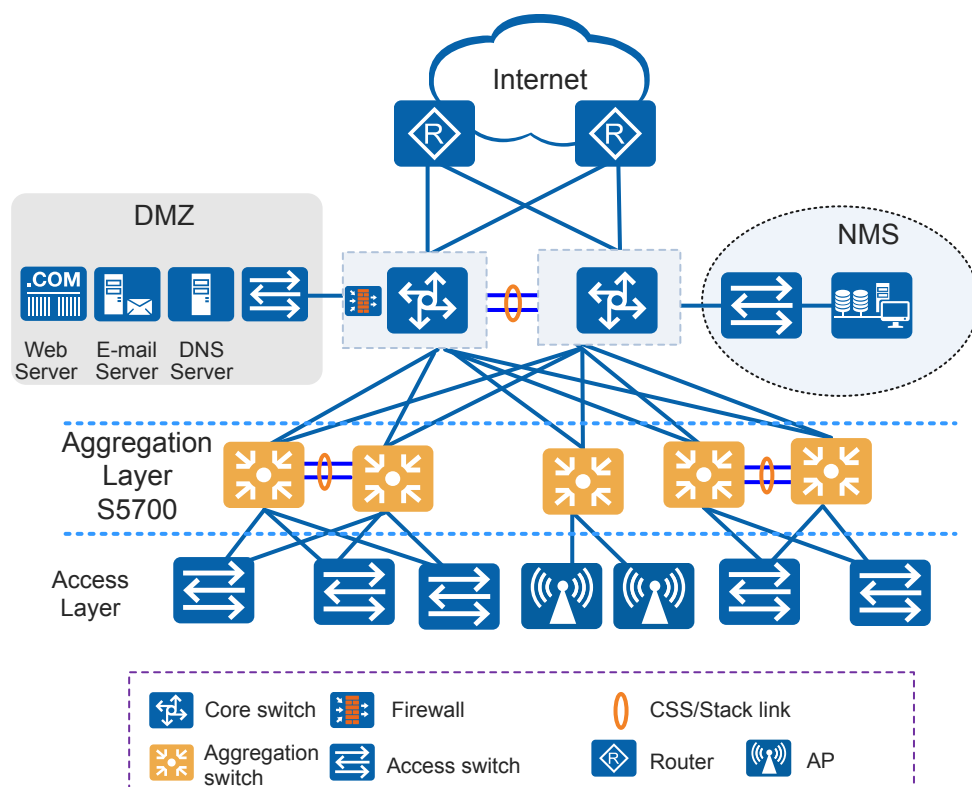
On the enterprise campus network, the S5700 switches connect to access switches through 100M/1000M interfaces for high-performance switching and to the core switches through 10GE optical interfaces. The S5700 aggregation switches, together with the core and access switches, provide an enterprise network solution with 10 Gbit/s backbone and 100M-to-the-desktop capabilities, meeting requirements for high bandwidth and multi-service operation.

The S5700 switches support SEP and RRPP for millisecond-level protection switching. Two or more S5700 switches set up a stack using iStack technology to create a distributed forwarding structure and provide fast fault recovery. iStack technology increases the number of user interfaces and improves the packet processing capability. The stacked S5700 switches can be managed as one device to facilitate network management and maintenance.

2.3 Small-scale Enterprise Campus Network

With powerful aggregation and routing capabilities of S5700 switches make them suitable for use as core switches in a small-scale enterprise network, as shown in **Figure 2-3**. Two or more S5700 switches use iStack technology to ensure high reliability. They provide a variety of access control policies to achieve centralized management and simplify configuration.

Figure 2-3 S5700 in a small-scale enterprise network
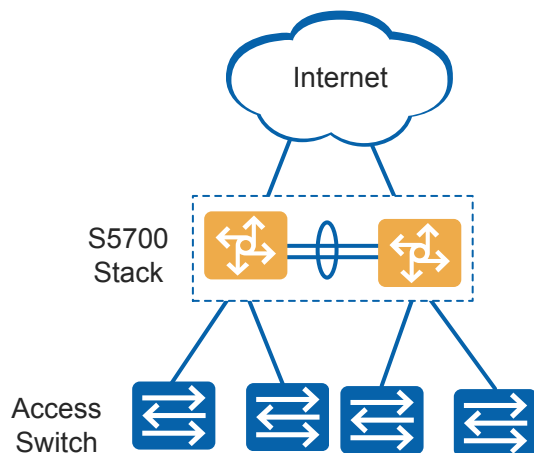
2.4 Application in Public Cloud

Agile Cloud Network is a network solution suite based on Huawei public cloud. The S5720SI/S5720S-SI (since V200R010C00), S5720LI (since V200R011C00), S5720S-LI (since V200R011C10), and S5720I-SI (since V200R012C00) can be located at the access layer of an agile cloud network as a cloud-managed device, as shown in **Figure 2-4**.

Cloud-managed devices are plug-and-play. They go online automatically after being powered on and connected with network cables, without the need for complex configurations. A cloud-managed device can connect to the cloud management platform and use bidirectional certificate authentication to ensure management channel security. The cloud-managed device provides the NETCONF and YANG interfaces, through which the cloud management platform delivers configurations to it. In addition, remote maintenance and fault diagnosis can be performed on the cloud management platform.

Figure 2-4 Application of S5700 in public cloud
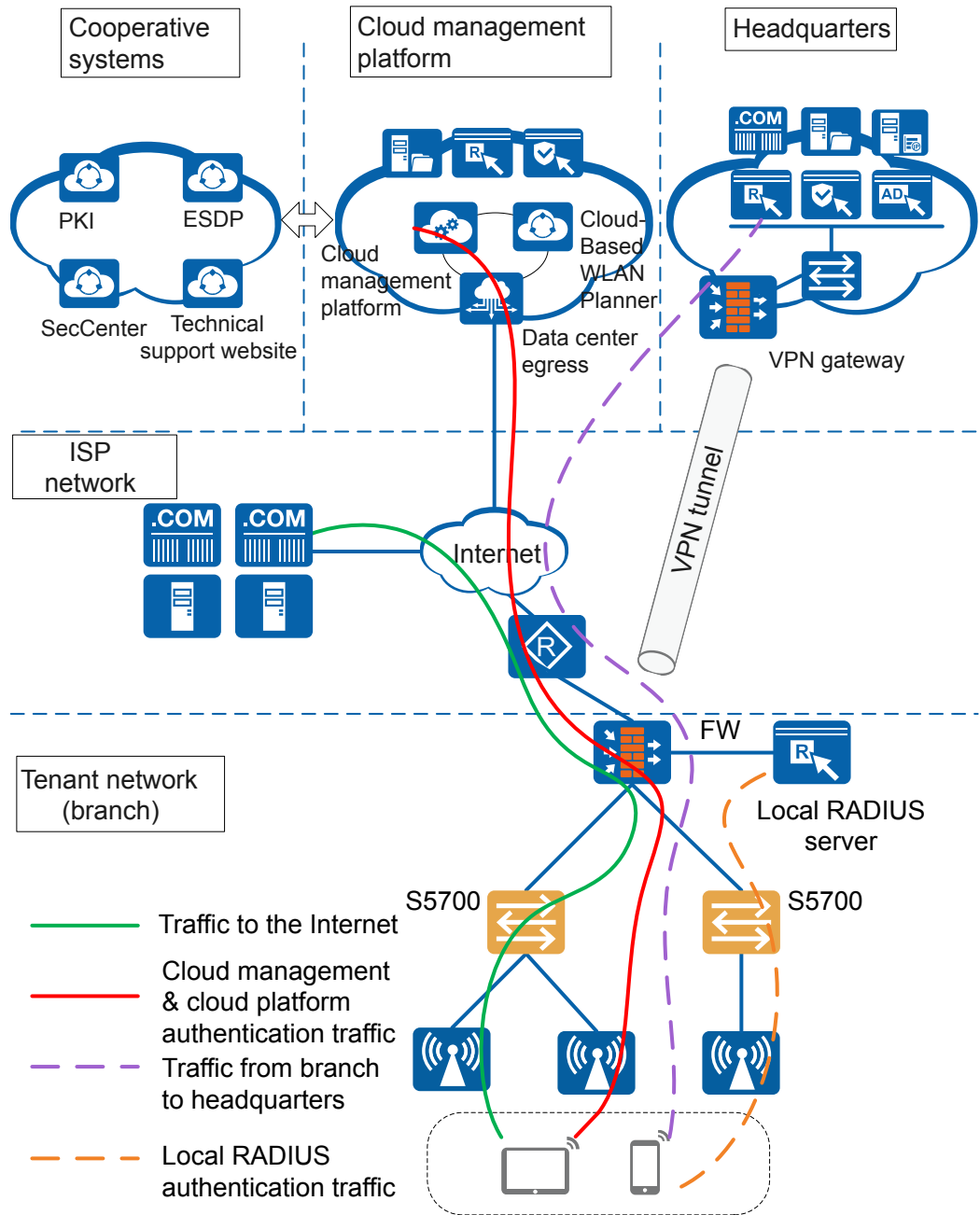
3 Performance Specifications

The features mentioned in the "Introduction", "Product Characteristics", and "Usage Scenarios" sections are not supported on all S5700 models. For the feature support of specific product models, download their brochures or feature lists from **Huawei official website**. (If your account is unauthorized, contact Huawei's support team).

4 Product Performance

About This Chapter

4.1 Product Features Supported by V200R012C00

Table 4-1 lists the features supported by the S5700.

Table 4-1 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.

Feature		Description	Supplementary Information
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 2500 Mbit/s, 10 Gbit/s, and auto-negotiation	Only the S5720-14X-PWH-SI-AC and S5720-28X-PWH-LI-AC support 2500 Mbit/s Ethernet interfaces.
		Flow control on interfaces	None
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI, S5720HI, and S5730HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5730SI, S5730S-EI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, S5720I-SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	

Feature		Description	Supplementary Information
		Proxy ARP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support inter-VLAN proxy ARP.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720SI, S5720I-SI, S5720S-SI, S5720EI, S5720HI, S5730HI, S5730SI, and S5730S-EI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.

Feature		Description	Supplementary Information
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Routing policies	None
		RIPv1/RIPv2	None
		OSPF	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MBGP	Only the S5720EI, S5720HI, and S5730HI support this function.
		IS-IS	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	

Feature		Description	Supplementary Information
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	None
		DHCPv6 server	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VRRP6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MLDv1 and MLDv2	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP Snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720I-SI, S5720S-SI, S5720LI, S5720S-LI, S5720HI, S5730HI, S5730SI, S5730S-EI, and S5720EI support this function.

Feature		Description	Supplementary Information
		GRE	Only the S5720HI, S5730HI, and S5720EI support this function.
		VLL	Only the S5720HI, S5730HI, and S5720EI support this function.
		PWE3	
		VPLS	
		IPSec Efficient VPN	Only the S5720EI, S5720HI, S5730HI, S5720LI, S5720S-LI, S5720SI, S5720I-SI, S5730SI, S5730S-EI, and S5720S-SI support this function.
MPLS	-	MPLS QoS	Only the S5720HI, S5730HI, and S5720EI support this function.
		MPLS TE	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/ OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only the S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only the S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5730SI, S5730S-EI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720HI, S5730HI, S5720SI, S5720I-SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, S5720S-LI, and S5710-X-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI, S5720HI, and S5730HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	

Feature		Description	Supplementary Information
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI, S5720HI, and S5730HI support this function.
		Tail drop	The S5720EI, S5720HI, and S5730HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI and S5730HI do not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI and S5730HI support this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	

Feature		Description	Supplementary Information
		EasyDeploy	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, S5720I-SI, S5730SI, S5730S-EI, and S5720S-SI can only function as clients.
		SVF	• The S5720HI and S5730HI can function as only a parent. • The S5720EI, S5700LI, S5720LI, S5720S-LI, S5700S-LI, S5710-X-LI, S5730SI, S5730S-EI, S5720SI, S5720I-SI, and S5720S-SI can only function as ASs.
		Cloud-based management	Only the S5720SI, S5720I-SI, S5720S-SI, S5720LI, and S5720S-LI support this function.
		Open Programmability System (OPS)	The S5700LI and S5700S-LI do not support this function.
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	

Feature		Description	Supplementary Information
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, S5720LI (except S5720-P-LI and S5720-16X-PWH-LI-AC), S5720S-LI (only S5720S-TP-LI and S5720S-28X-LI-24S-AC), and S5720I-SI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI, S5720HI, and S5730HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None

Feature		Description	Supplementary Information
		ARP gateway anti-collision	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and authentication	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	

Feature		Description	Supplementary Information
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI and S5730HI can function as a control device.
Network managem ent	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI and S5730HI support this function.
		sFlow	The S5720HI and S5730HI do not support this function.
		NetStream	Only the S5720HI and S5730HI support this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720EI, S5720HI, and S5730HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI and S5730HI support this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	

Feature		Description	Supplementary Information
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	
VXLAN	-	Virtual eXtensible Local Area Network (VXLAN)	Only the S5720HI and S5730HI support this function.

4.2 Product Features Supported by V200R011C10

Table 4-2 lists the features supported by the S5700.

Table 4-2 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 2500 Mbit/s, 10 Gbit/s, and auto-negotiation	Only the S5720-14X-PWH-SI-AC and S5720-28X-PWH-LI-AC support 2500 Mbit/s Ethernet interfaces.
		Flow control on interfaces	None
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	

Feature		Description	Supplementary Information
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	

Feature		Description	Supplementary Information
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5730SI, S5730S-EI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support inter-VLAN proxy ARP.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720SI, S5720S-SI, S5720EI, S5720HI, S5730SI, and S5730S-EI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	

Feature		Description	Supplementary Information
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Routing policies	None
		RIPv1/RIPv2	None
		OSPF	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
		MBGP	Only the S5720EI and S5720HI support this function.
		IS-IS	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	None
		DHCPv6 server	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VRRP6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MLDv1 and MLDv2	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM for IPv6	
		PIM-SM for IPv6	

Feature		Description	Supplementary Information
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP Snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720S-SI, S5720LI, S5720S-LI, S5720HI, S5730SI, S5730S-EI, and S5720EI support this function.
		GRE	Only the S5720HI and S5720EI support this function.
		VLL	Only the S5720HI and S5720EI support this function.
		PWE3	
		VPLS	
		IPSec Efficient VPN	Only the S5720EI, S5720HI, S5720LI, S5720S-LI, S5720SI, S5730SI, S5730S-EI, and S5720S-SI support this function.
MPLS	-	MPLS QoS	Only the S5720HI and S5720EI support this function.
		MPLS TE	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	

Feature		Description	Supplementary Information
	Stacking	Stack card supporting the stacking function	Only the S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only the S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5730SI, S5730S-EI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720HI, S5720SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, S5720S-LI, and S5710-X-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.
		Tail drop	The S5720EI and S5720HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	

Feature		Description	Supplementary Information
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, S5730SI, S5730S-EI, and S5720S-SI can only function as clients.
		SVF	• The S5720HI can function as only a parent. • The S5720EI, S5700LI, S5720LI, S5720S-LI, S5700S-LI, S5710-X-LI, S5730SI, S5730S-EI, S5720SI and S5720S-SI can only function as ASs.
		Cloud-based management	Only the S5720SI, S5720S-SI, S5720LI, and S5720S-LI support this function.
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	

Feature		Description	Supplementary Information
		Version matching check	
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, S5720LI (except S5720-P-LI and S5720-16X-PWH-LI-AC), S5720S-LI (only S5720S-TP-LI and S5720S-28X-LI-24S-AC), and S5720HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI and S5720HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	

Feature		Description	Supplementary Information
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and	AAA	Local authentication and authorization	None

Feature		Description	Supplementary Information
authentication		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720EI and S5720HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	

Feature		Description	Supplementary Information
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	
VXLAN	-	Virtual eXtensible Local Area Network (VXLAN)	Only the S5720HI supports this function.

4.3 Product Features Supported by V200R011C00

Table 4-3 lists the features supported by the S5700.

Table 4-3 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 2500 Mbit/s, 10 Gbit/s, and auto-negotiation	Only the S5720-14X-PWH-SI-AC and S5720-28X-PWH-LI-AC support 2500 Mbit/s Ethernet interfaces.
		Flow control on interfaces	None
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	

Feature		Description	Supplementary Information
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	

Feature		Description	Supplementary Information
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support inter-VLAN proxy ARP.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720SI, S5720S-SI, S5720EI, and S5720HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	

Feature		Description	Supplementary Information
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Routing policies	None
		RIPv1/RIPv2	None
		OSPF	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MBGP	
		IS-IS	

Feature		Description	Supplementary Information
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	None
		DHCPv6 server	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VRRP6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	

Feature		Description	Supplementary Information
		Controllable multicast	
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720S-SI, S5720LI, S5720S-LI, S5720HI, and S5720EI support this function.
		GRE	Only the S5720HI and S5720EI support this function.
		VLL	Only the S5720HI and S5720EI support this function.
		PWE3	
		VPLS	
		IPSec Efficient VPN	Only the S5720EI, S5720HI, S5720SI, and S5720S-SI support this function.
MPLS	-	MPLS QoS	Only the S5720HI and S5720EI support this function.
		MPLS TE	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/ OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720HI, S5720SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, S5720S-LI, and S5710-X-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	

Feature		Description	Supplementary Information
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.
		Tail drop	The S5720EI and S5720HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, and S5720S-SI can only function as clients.

Feature		Description	Supplementary Information
		SVF	• The S5720HI can function as only a parent. • The S5720EI, S5700LI, S5720LI, S5720S-LI, S5700S-LI, S5710-X-LI, S5720SI and S5720S-SI can only function as ASs.
		Cloud-based management	Only the S5720SI, S5720S-SI, S5720-12TP-LI-AC, S5720-12TP-PWR-LI-AC, S5720-28P-LI-AC, S5720-52P-LI-AC, S5720-28P-PWR-LI-AC, S5720-52P-PWR-LI-AC, S5720-28TP-PWR-LI-ACL, S5720-28TP-LI-AC, S5720-28TP-PWR-LI-AC, and S5720-52X-PWR-LI-AC support this function.
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	

Feature		Description	Supplementary Information
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, S5720LI (except S5720-P-LI and S5720-16X-PWH-LI-AC), S5720S-LI (only S5720S-TP-LI and S5720S-28X-LI-24S-AC), and S5720HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI and S5720HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI

Feature		Description	Supplementary Information
		ARP gateway anti-collision	and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and authentication	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	

Feature		Description	Supplementary Information
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network managem ent	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720EI and S5720HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	

4.4 Product Features Supported by V200R010C00

Table 4-4 lists the features supported by the S5700.

Table 4-4 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 2500 Mbit/s, 10 Gbit/s, and auto-negotiation	Only the S5720-14X-PWH-SI-AC supports 2500 Mbit/s Ethernet interfaces.
		Flow control on interfaces	None
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	

Feature		Description	Supplementary Information
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.

Feature		Description	Supplementary Information
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720EI and S5720HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	

Feature		Description	Supplementary Information
	ERPS	G.8032 v1/v2	Only the S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Routing policies	None
		RIPv1/RIPv2	None
		OSPF	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MBGP	
		IS-IS	
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	

Feature		Description	Supplementary Information
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	None
		DHCPv6 server	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		VRRP6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP Snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720S-SI, S5720HI, and S5720EI support this function.
		GRE	Only the S5720HI and S5720EI support this function.

Feature		Description	Supplementary Information
MPLS	-	VLL	Only the S5720HI and S5720EI support this function.
		PWE3	
		VPLS	
		MPLS QoS	Only the S5720HI and S5720EI support this function.
		MPLS TE	
Device reliability	BFD	Basic BFD functions	Only the S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only the S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720HI, S5720SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.

Feature		Description	Supplementary Information
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, and S5710-X-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.
		Tail drop	The S5720EI and S5720HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	

Feature		Description	Supplementary Information
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy	The S5700LI, S5700S-LI, S5720LI, S5720S-LI, S5710-X-LI, S5720SI, and S5720S-SI can only function as clients.
		SVF	● The S5720HI can only function as a parent. ● The S5720EI, S5700LI, S5720LI, S5720S-LI, S5700S-LI, S5710-X-LI, S5720SI and S5720S-SI can only function as ASs.
		Cloud-based management	Only the S5720SI and S5720S-SI support this function.
	File system	File system	None
		Directory and file management	

Feature		Description	Supplementary Information
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	
		Dying gasp	This function is supported by only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, S5720LI (except S5720-16X-PWH-LI-AC), S5720S-LI (only S5720S-TP-LI and S5720S-28X-LI-24S-AC), and S5720HI.
		Information center and unified management of logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	

Feature		Description	Supplementary Information
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI and S5720HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI, S5720LI, S5720S-LI, S5710-X-LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	

Feature		Description	Supplementary Information
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and authentication	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	

Feature		Description	Supplementary Information
		RMON2	Only the S5720EI and S5720HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	

4.5 Product Features Supported by V200R009C00

Table 4-5 lists the features supported by the S5700.

Table 4-5 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 2500 Mbit/s, 10 Gbit/s, and auto-negotiation	Only the S5720-14X-PWH-SI-AC supports 2500 Mbit/s Ethernet interfaces.
		Flow control on interfaces	None
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	

Feature		Description	Supplementary Information
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None

Feature		Description	Supplementary Information
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5710-X-LI, S5720SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI, S5700S-LI, and S5710-X-LI do not support inter-VLAN proxy ARP.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720EI and S5720HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	

Feature		Description	Supplementary Information
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Routing policies	None
		RIPv1/RIPv2	None
		OSPF	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		MBGP	
		IS-IS	

Feature		Description	Supplementary Information
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	None
		DHCPv6 server	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP Snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	

Feature		Description	Supplementary Information
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720S-SI, S5720HI, and S5720EI support this function.
		GRE	Only the S5720HI and S5720EI support this function.
		VLL	Only the S5720HI and S5720EI support this function.
		PWE3	
		VPLS	
MPLS	-	MPLS QoS	Only the S5720HI and S5720EI support this function.
		MPLS TE	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only S5700LI, S5700S-LI, S5710-X-LI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720HI, S5720SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	

Feature		Description	Supplementary Information
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.
		Tail drop	The S5720EI and S5720HI do not support this function.

Feature		Description	Supplementary Information
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy	The S5700LI, S5700S-LI, S5710-X-LI, S5720SI, and S5720S-SI can only function as clients.
		SVF	● The S5720HI can only function as a parent. ● The S5720EI, S5700LI, S5700S-LI, S5710-X-LI, S5720SI and S5720S-SI can only function as ASs.
	File system	File system	None
		Directory and file management	

Feature		Description	Supplementary Information
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, and S5720HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI and S5720HI support this function.

Feature		Description	Supplementary Information
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI, S5710-X-LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	

Feature		Description	Supplementary Information
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and authentication	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	

Feature		Description	Supplementary Information
		RMON2	Only the S5720EI and S5720HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	

4.6 Product Features Supported by V200R008C00

Table 4-6 lists the features supported by the S5700.

Table 4-6 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Full-duplex, half-duplex and auto-negotiation modes of Ethernet interfaces	The S5720HI and S5720EI do not support the half-duplex mode.
		Rates of an Ethernet interface: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s, and auto-negotiation	None
		Flow control on interfaces	
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	

Feature		Description	Supplementary Information
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation	
		Broadcast storm control	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None

Feature		Description	Supplementary Information
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5710-X-LI, S5720SI, and S5720S-SI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI, S5700S-LI, and S5710-X-LI do not support inter-VLAN proxy ARP.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720EI and S5720HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	

Feature		Description	Supplementary Information
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI, S5710-X-LI, and S5700S-LI do not support this function.
		URPF check	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Routing policies	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		RIPv1/RIPv2	
		OSPF	
		BGP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		MBGP	
		IS-IS	

Feature		Description	Supplementary Information
		PBR (redirection in a traffic policy)	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		DHCPv6 server	
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BGP4+ & ISIS for IPv6	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	

Feature		Description	Supplementary Information
VPN	-	Multi-VPN-Instance CE (MCE)	Only the S5720SI, S5720S-SI, and S5720EI support this function.
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		BFD for static route/IS-IS/ OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only S5720-C-EI, S5720-PC-EI, S5720-X-EI, and S5720-P-EI support this function.
		Service interface supporting the stacking function	Only S5700LI, S5700S-LI, S5710-X-LI, some S5720EI models (S5720-C-EI, S5720-X-EI, S5720-PC-EI), S5720SI, and S5720S-SI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
		Hardware-level delay and variation measurement	None

Feature		Description	Supplementary Information
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, inner VLAN IDs, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, and S5710-X-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.
		Tail drop	The S5720EI and S5720HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.

Feature		Description	Supplementary Information
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy	The S5700LI, S5700S-LI, S5710-X-LI, S5720SI, and S5720S-SI can function as clients.
		SVF	● The S5720HI can only function as a parent. ● The S5720EI, S5700LI, S5700S-LI, S5710-X-LI, S5720SI and S5720S-SI can only function as ASs.
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	

Feature		Description	Supplementary Information
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, and S5720HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI and S5720HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI, S5710-X-LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None

Feature		Description	Supplementary Information
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and authentica tion	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	

Feature		Description	Supplementary Information
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720EI and S5720HI support this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	

4.7 Product Features Supported by V200R007C00

Table 4-7 lists the features supported by the S5700.

Table 4-7 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Operating modes of full-duplex, half-duplex and auto-negotiation	Only the S5720HI and S5720EI do not support the operating mode of half-duplex.
		Ethernet interface rates: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s, and auto-negotiation	None
		Flow control on interfaces	
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation and forwarding restriction	
		Broadcast storm suppression	
	VLAN	Access modes of LNP, access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	

Feature		Description	Supplementary Information
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI and S5700S-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720EI and S5720HI support this function.

Feature		Description	Supplementary Information
		MAC address spoofing defense	Only the S5700LI and S5700S-LI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI and S5700S-LI do not support this function.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720EI and S5720HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	Only the S5700S-LI does not support this function.

Feature		Description	Supplementary Information
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI and S5700S-LI do not support this function.
		URPF check	
		Routing policies	
		RIPv1/RIPv2	
		OSPF	The S5700LI and S5700S-LI do not support this function.
		BGP	
		MBGP	
		IS-IS	
		PBR (redirection in a traffic policy)	
	Multicast routing features	IGMPv1/v2/v3	The S5700LI and S5700S-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	The S5700LI and S5700S-LI do not support this function.
		DHCPv6 server	
		DHCPv6 relay	

Feature		Description	Supplementary Information
		OSPFv3	The S5700LI and S5700S-LI do not support this function.
		BGP4+ & ISIS for IPv6	
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
VPN	MCE	Multi-VPN-Instance CE (MCE)	The S5700LI and S5700S-LI do not support this function.
Device reliability	BFD	Basic BFD functions	The S5700LI and S5700S-LI do not support this function.
		BFD for static route/IS-IS/ OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only the S5720EI supports this function.
		Service interface supporting the stacking function	Only some S5700LI models support this function.
	Others	VRRP	The S5700LI and S5700S-LI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	

Feature		Description	Supplementary Information
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI and S5700S-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, inner VLAN IDs, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI and S5700S-LI do not support this function.
		Traffic classification based on inner 802.1p priorities	Only the S5720EI and S5720HI support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720EI and S5720HI support this function.

Feature		Description	Supplementary Information
		Tail drop	The S5720EI and S5720HI do not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy (client)	
		EasyDeploy (commander)	The S5700LI and S5700S-LI do not support this function.
		Easy deployment and maintenance	
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and	Hardware monitoring	None

Feature		Description	Supplementary Information
	maintenance	Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, and S5720HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		Remote in-service upgrade	
		In-service patching	
Security	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5720EI supports this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None

Feature		Description	Supplementary Information
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
User access and	AAA	Local authentication and authorization	None

Feature		Description	Supplementary Information
authentication		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	Policy association	-	Only the S5720HI can function as a control device.
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720EI and S5720HI supports this function.
WLAN	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	

Feature		Description	Supplementary Information
		QoS	
		WLAN Security Specifications	
		WLAN user management specifications	

4.8 Product Features Supported by V200R006C00

📖 **NOTE**

Features marked with * are added in V200R006.

Table 4-8 lists the features supported by the S5700.

Table 4-8 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Operating modes of full-duplex, half-duplex and auto-negotiation	Only the S5720HI does not support the operating mode of half-duplex.
		Ethernet interface rates: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s, and auto-negotiation	None
		Flow control on interfaces	
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation and forwarding restriction	

Feature		Description	Supplementary Information
		Broadcast storm suppression	
	VLAN	Access modes of LNP, access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	None
		Super VLAN	The S5700LI and S5700S-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	

Feature		Description	Supplementary Information
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5720HI supports this function.
		MAC address spoofing defense	Only the S5700LI and S5700S-LI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI and S5700S-LI do not support this function.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5720HI supports this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	

Feature		Description	Supplementary Information
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	Only the S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI and S5700S-LI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI and S5700S-LI do not support this function.
		URPF check	
		Routing policies	
		RIPv1/RIPv2	
		OSPF	The S5700LI and S5700S-LI do not support this function.
		BGP	
		MBGP	
		IS-IS	
		PBR (redirection in a traffic policy)	
	Multicast routing features	IGMPv1/v2/v3	The S5700LI and S5700S-LI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	

Feature		Description	Supplementary Information
		RIPng	The S5700LI and S5700S-LI do not support this function.
		DHCPv6 server	
		DHCPv6 relay	
		OSPFv3	The S5700LI and S5700S-LI do not support this function.
		BGP4+ & ISIS for IPv6	
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
VPN	MCE	Multi-VPN-Instance CE (MCE)	The S5700LI and S5700S-LI do not support this function.
Device reliability	BFD	Basic BFD functions	The S5700LI and S5700S-LI do not support this function.
		BFD for static route/IS-IS/ OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Service interface supporting the stacking function	Only some S5700LI models support this function.
	Others	VRRP	The S5700LI and S5700S-LI do not support this function.

Feature			Description	Supplementary Information
Ethernet OAM	EFM OAM (802.3ah)		Automatic discovery	None
			Link fault detection	
			Link fault troubleshooting	
			Remote loopback	
	CFM OAM (802.1ag)		Software-level CCM	None
			MAC ping	
			MAC trace	
	OAM association		Association between 802.1ag and 802.3ah	The S5700LI and S5700S-LI do not support this function.
			Association between 802.3ah and 802.1ag	
	Y.1731		Delay and variation measurement	None
QoS features	Traffic classifier		Traffic classification based on ACLs	None
			Traffic classification based on outer 802.1p priorities, inner VLAN IDs, outer VLAN IDs, source MAC addresses, and Ethernet types	
			Traffic classification based on inner VLAN IDs	The S5700LI and S5700S-LI do not support this function.
			Traffic classification based on inner 802.1p priorities	The S5700LI and S5700S-LI do not support this function.
	Traffic behavior		Access control after traffic classification	None
			Traffic policing based on traffic classification	
			Re-marking based on traffic classification	
			Associating traffic classifiers with traffic behaviors	
	Traffic policing		Rate limiting on inbound and outbound interfaces	
	Traffic shaping		Traffic shaping on interfaces and queues	

Feature		Description	Supplementary Information
	Congestion avoidance	Weighted Random Early Detection (WRED)	Only the S5720HI supports this function.
		Tail drop	The S5720HI does not support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	The S5720HI does not support this function.
		PQ+WRR	
	HQoS*	Hierarchical Quality of Service	Only the S5720HI supports this function.
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy (client)	
		EasyDeploy (commander)	The S5700LI and S5700S-LI do not support this function.
		Easy deployment and maintenance	
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	

Feature		Description	Supplementary Information
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5720HI, and S5700S-LI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		Remote in-service upgrade	
		In-service patching	
Security	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	

Feature		Description	Supplementary Information
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	ARP security	ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	

Feature		Description	Supplementary Information
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		IPCA*	Only the S5720HI supports this function.
		sFlow	The S5720HI does not support this function.
		NetStream	Only the S5720HI supports this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2	Only the S5720HI supports this function.
WLAN*	-	AP Management Specifications	Only the S5720HI supports this function.
		Radio Management Specifications	
		WLAN Service Management Specifications	
		QoS	

Feature		Description	Supplementary Information
		WLAN Security Specifications	
		WLAN user management specifications	

4.9 Product Features Supported by V200R005C00

NOTE

Features marked with * are added in V200R005.

Table 4-9 lists the features supported by the S5700.

Table 4-9 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Operating modes of full-duplex, half-duplex and auto-negotiation	None
		Ethernet interface rates: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s, and auto-negotiation	
		Flow control on interfaces	
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation and forwarding restriction	
		Broadcast storm suppression	

Feature		Description	Supplementary Information
	VLAN	Access modes of LNP, access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: • MAC address + IP address • MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	The S5700SI and S5700EI do not support this function.
		Super VLAN	The S5700LI and S5700S-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	
	VCMP*	VCMP (VLAN centralized management protocol)	None
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	

Feature		Description	Supplementary Information
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5710EI, S5700HI, and S5710HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5700SI, and S5700EI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI and S5700S-LI do not support this function.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5710EI, S5700HI, and S5710HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		VBST*	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	

Feature		Description	Supplementary Information
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		DHCP client	None
		DHCP server	
		DHCP relay	
		DHCP policy VLAN	The S5700LI and S5700S-LI do not support this function.
		URPF check	
		Routing policies	
		RIPv1/RIPv2	
		OSPF	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BGP	
		MBGP	
		IS-IS	
		PBR (redirection in a traffic policy)	
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		PIM-DM	
		PIM-SM	
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	

Feature		Description	Supplementary Information
		DHCPv6 snooping	
		RIPng	The S5700LI and S5700S-LI do not support this function.
		DHCPv6 server	
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BGP4+ & ISIS for IPv6	
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
MPLS & VPN	Basic MPLS functions	LDP	Only the S5710EI, S5700HI, and S5710HI support this function.
		Double MPLS labels	
		Mapping from DSCP to EXP priorities in MPLS packets	
		Mapping from 802.1p priorities to EXP priorities in MPLS packets	
	MPLS TE	MPLS TE tunnel	
		MPLS TE protection group	
	VPN	Multi-VPN-Instance CE (MCE)	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		VLL in SVC, Martini, CCC, and Kompella modes	Only the S5710EI, S5700HI, and S5710HI support this function.
		VLL FRR	

Feature		Description	Supplementary Information
		VPLS	
		MPLS L3VPN	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BFD for static route/IS-IS/OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only some S5700SI models and S5700EI support this function.
		Service interface supporting the stacking function	Only some S5700LI models, S5710EI, and S5700HI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5700SI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
		Hardware-level CCM	Only the S5700HI supports this function.
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI and S5700S-LI do not support this function.
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
		Hardware-level delay and variation measurement	Only the S5700HI supports this function.
QoS features	Traffic classifier	Traffic classification based on ACLs	None

Feature		Description	Supplementary Information
		Traffic classification based on outer 802.1p priorities, inner VLAN IDs, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		Traffic classification based on inner 802.1p priorities	The S5700LI, S5700S-LI, and S5700SI do not support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Simple Random Early Detection (SRED)	Only the S5700EI supports this function.
		Weighted Random Early Detection (WRED)	Only the S5710EI, S5700HI, and S5710HI support this function.
		Tail drop	Only the S5700LI, S5700S-LI, and S5700SI support this function.
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	
		PQ+WRR	
Configuration and	Login and configurati	Command line configuration	None

Feature		Description	Supplementary Information
maintena nce	on manageme nt	Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy (client)	
		EasyDeploy (commander)	The S5700LI and S5700S-LI do not support this function.
		Easy deployment and maintenance	
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitorin g and maintenan ce	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	
		Version matching check	
		Dying gasp	Only the S5700LI (except S5700-LI-BAT and S5700-52X-LI-48CS-AC), S5700S-LI, S5700HI, and S5710HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None

Feature		Description	Supplementary Information
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		Remote in-service upgrade	
		In-service patching	
Security	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	
		Hybrid authentication	
	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5710EI, S5700HI, and S5710HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None

Feature		Description	Supplementary Information
		ARP gateway anti-collision	The S5700LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
Network management	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	

Feature		Description	Supplementary Information
		sFlow	The S5700SI does not support this function.
		NetStream	Only the S5710EI, S5700HI, and S5710HI support this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	
		RMON2*	Only the S5710EI, S5700HI, and S5710HI support this function.

4.10 Product Features Supported by V200R003C00

Table 4-10 lists the features supported by the S5700.

Table 4-10 Features supported by the S5700

Feature		Description	Supplementary Information
Ethernet features	Ethernet	Operating modes of full-duplex, half-duplex and auto-negotiation	None
		Ethernet interface rates: 10 Mbit/s, 100 Mbit/s, 1000 Mbit/s, 10 Gbit/s, and auto-negotiation	
		Flow control on interfaces	
		Jumbo frames	
		Link aggregation	
		Load balancing among links of a trunk	
		Transparent transmission of Layer 2 protocol packets	

Feature		Description	Supplementary Information
		Device Link Detection Protocol (DLDP)	
		Link Layer Discovery Protocol (LLDP)	
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	
		Interface isolation and forwarding restriction	
		Broadcast storm suppression	
	VLAN	Access modes of access, trunk, hybrid, and QinQ	None
		Default VLAN	
		VLAN assignment based on interfaces, MAC addresses, protocols, and IP subnets	
		VLAN assignment based on the following policies: ● MAC address + IP address ● MAC address + IP address + interface number	
		Adding double VLAN tags to packets based on interface	The S5700SI and S5700EI do not support this function.
		Super VLAN	The S5700LI and S5700S-LI do not support this function.
		VLAN mapping	None
		Selective QinQ	
		MUX VLAN	
		Voice VLAN	
		Guest VLAN	
	GVRP	Generic Attribute Registration Protocol (GARP)	None
		GARP VLAN Registration Protocol (GVRP)	

Feature		Description	Supplementary Information
	MAC	Automatic learning and aging of MAC addresses	None
		Static, dynamic, and blackhole MAC address entries	
		Packet filtering based on source MAC addresses	
		Interface-based MAC learning limiting	
		Sticky MAC address entries	
		MAC address flapping detection	
		Configuring MAC address learning priorities for interfaces	Only the S5710EI, S5700HI, and S5710HI support this function.
		MAC address spoofing defense	Only the S5700LI, S5700S-LI, S5700SI, and S5700EI support this function.
		Port bridge	None
	ARP	Static and dynamic ARP entries	None
		ARP in a VLAN	
		Aging of ARP entries	
		Proxy ARP	The S5700LI and S5700S-LI do not support this function.
		Multi-port ARP for connecting to the NLB cluster server	Only the S5710EI, S5700HI, and_S5710HI support this function.
Ethernet loop protection	MSTP	STP	None
		RSTP	
		MSTP	
		BPDU protection, root protection, and loop protection	
		TC-BPDU attack defense	
		STP loop detection	
	Loopback detection	Loop detection on an interface	

Feature		Description	Supplementary Information
	SEP	Smart Ethernet Protection (SEP)	
	Smart Link	Smart Link	
		Smart Link multi-instance	
		Monitor Link	
	RRPP	RRPP protective switchover	
		Single RRPP ring, tangent RRPP ring, and intersecting RRPP ring	
		Hybrid networking of RRPP rings and other ring networks	
	ERPS	G.8032 v1/v2	The S5700S-LI does not support this function.
		Single closed ring	
		Subring	
IPv4/IPv6 forwarding	IPv4 and unicast routes	Static IPv4 routes	None
		VRF	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		DHCP client	None
		DHCP server	The S5700LI and S5700S-LI do not support this function.
		DHCP relay	
		DHCP policy VLAN	The S5700LI and S5700S-LI do not support this function.
		URPF check	
		Routing policies	
		RIPv1/RIPv2	
		OSPF	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BGP	
		MBGP	
		IS-IS	
		PBR (redirection in a traffic policy)	
	Multicast routing features	IGMPv1/v2/v3	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		PIM-DM	
		PIM-SM	

Feature		Description	Supplementary Information
		MSDP	
		Multicast routing policies	
		RPF	
	IPv6 features	IPv6 protocol stack	None
		ND and ND snooping	
		DHCPv6 snooping	
		RIPng	The S5700LI and S5700S-LI do not support this function.
		DHCPv6 server	
		DHCPv6 relay	
		OSPFv3	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BGP4+ & ISIS for IPv6	
		VRRP6	
		MLDv1 and MLDv2	
		PIM-DM for IPv6	
		PIM-SM for IPv6	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	None
		Fast leave	
		IGMP snooping proxy	
		MLD snooping	
		Interface-based multicast traffic suppression	
		Inter-VLAN multicast replication	
		Controllable multicast	
MPLS & VPN	Basic MPLS functions	LDP	Only the S5710EI, S5700HI, and S5710HI support this function.
		Double MPLS labels	
		Mapping from DSCP to EXP priorities in MPLS packets	
		Mapping from 802.1p priorities to EXP priorities in MPLS packets	
	MPLS TE	MPLS TE tunnel	
		MPLS TE protection group	

Feature		Description	Supplementary Information
	VPN	Multi-VPN-Instance CE (MCE)	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		VLL in SVC, Martini, CCC, and Kompella modes	Only the S5710EI, S5700HI, and S5710HI support this function.
		VLL FRR	
		VPLS	
		MPLS L3VPN	
Device reliability	BFD	Basic BFD functions	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		BFD for static route/IS-IS/OSPF/BGP	
		BFD for PIM	
		BFD for VRRP	
	Stacking	Stack card supporting the stacking function	Only some S5700SI models and S5700EI support this function.
		Service interface supporting the stacking function	Only some S5700LI models, S5710EI, and S5700HI support this function.
	Others	VRRP	The S5700LI, S5700S-LI, and S5700SI do not support this function.
Ethernet OAM	EFM OAM (802.3ah)	Automatic discovery	None
		Link fault detection	
		Link fault troubleshooting	
		Remote loopback	
	CFM OAM (802.1ag)	Software-level CCM	None
		MAC ping	
		MAC trace	
		Hardware-level CCM	Only the S5700HI supports this function.
	OAM association	Association between 802.1ag and 802.3ah	The S5700LI and S5700S-LI do not support this function.

Feature		Description	Supplementary Information
		Association between 802.3ah and 802.1ag	
	Y.1731	Delay and variation measurement	None
		Hardware-level delay and variation measurement	Only the S5700HI supports this function.
QoS features	Traffic classifier	Traffic classification based on ACLs	None
		Traffic classification based on outer 802.1p priorities, inner VLAN IDs, outer VLAN IDs, source MAC addresses, and Ethernet types	
		Traffic classification based on inner VLAN IDs	The S5700LI, S5700S-LI, and S5700SI do not support this function.
		Traffic classification based on inner 802.1p priorities	The S5700LI, S5700S-LI, and S5700SI do not support this function.
	Traffic behavior	Access control after traffic classification	None
		Traffic policing based on traffic classification	
		Re-marking based on traffic classification	
		Associating traffic classifiers with traffic behaviors	
	Traffic policing	Rate limiting on inbound and outbound interfaces	
	Traffic shaping	Traffic shaping on interfaces and queues	
	Congestion avoidance	Simple Random Early Detection (SRED)	Only the S5700EI supports this function.
		Weighted Random Early Detection (WRED)	Only the S5710EI, S5700HI, and S5710HI support this function.
		Tail drop	Only the S5700SI, S5700LI, and S5700S-LI support this function.

Feature		Description	Supplementary Information
	Congestion management	Priority Queuing (PQ)	None
		Weighted Deficit Round Robin (WDRR)	
		PQ+WDRR	
		Weighted Round Robin (WRR)	
		PQ+WRR	
Configuration and maintenance	Login and configuration management	Command line configuration	None
		Error message and help information in English	
		Login through console and Telnet terminals	
		SSH1.5/SSH2	
		Send function and data communication between terminal users	
		Hierarchical user authority management and commands	
		SNMP-based NMS management (eSight)	
		Web page-based configuration and management	
		EasyDeploy (client)	
		EasyDeploy (commander)	The S5700LI and S5700S-LI do not support this function.
		Easy deployment and maintenance	
	File system	File system	None
		Directory and file management	
		File upload and download through FTP, TFTP, SFTP, SCP, and FTPS	
	Monitoring and maintenance	Hardware monitoring	None
		Reporting alarms on abnormal device temperature	
		Second-time fault detection to prevent detection errors caused by instant interference	

Feature		Description	Supplementary Information
		Version matching check	
		Dying gasp	Only the S5700LI, S5700S-LI, S5700HI, and S5710HI support this function.
		Information center and unified management over logs, alarms, and debugging information	None
		Electronic labels, and command line query and backup	
		Virtual cable test (VCT)	
		User operation logs	
		Detailed debugging information for network fault diagnosis	
		Network test tools such as traceroute and ping commands	
		Port mirroring, flow mirroring, and remote mirroring	
		Energy saving	
	Version upgrade	Device software loading and online software loading	None
		BootROM online upgrade	
		Remote in-service upgrade	
		In-service patching	
Security	AAA	Local authentication and authorization	None
		RADIUS authentication, authorization, and accounting	
		HWTACACS authentication, authorization, and accounting	
	NAC	802.1X authentication	None
		MAC address authentication	
		Portal authentication	The S5700LI and S5700S-LI do not support this function.

Feature		Description	Supplementary Information
		Hybrid authentication	The S5700LI, S5700S-LI, and S5700SI do not support this function.
	ARP security	ARP packet rate limiting based on source MAC addresses	Only the S5710EI, S5700HI, and S5710HI support this function.
		ARP packet rate limiting based on source IP addresses, interfaces, and VLANs, and global ARP packet rate limiting	None
		ARP anti-spoofing	
		Association between ARP and STP	None
		ARP gateway anti-collision	The S5700LI and S5700S-LI do not support this function.
		Dynamic ARP Inspection (DAI) and Static ARP Inspection (SAI)	None
		Egress ARP Inspection (EAI)	
	IP security	ICMP attack defense	None
		IP source guard	
	Local attack defense	CPU attack defense	
	MFF	MAC-Forced Forwarding (MFF)	
	DHCP snooping	DHCP snooping	
		Option 82 function and dynamic rate limiting for DHCP packets	
	Attack defense	Defense against flood attacks without IP payloads, attacks from IGMP null payload packets, LAND attacks, Smurf attacks, and attacks from packets with invalid TCP flag bits	

| Feature		Description	Supplementary Information
		Defense against attacks from many fragments, attacks from many packets with offsets, attacks from repeated packet fragments, Tear Drop attacks, Syndrop attacks, NewTear attacks, Bonk attacks, Nesta attacks, Rose attacks, Fawx attacks, Ping of Death attacks, and Jolt attacks	
		Defense against TCP SYN flood attacks, UDP flood attacks (including Fraggle attacks and UDP diagnosis port attacks), and ICMP flood attacks	
Network managem ent	-	Ping and traceroute	None
		NQA	
		Network Time Protocol (NTP)	
		sFlow	The S5700SI does not support this function.
		NetStream	Only the S5710EI, S5700HI, and S5710HI support this function.
		SNMP v1/v2c/v3	None
		Standard MIB	
		HTTP	
		Hypertext Transfer Protocol Secure (HTTPS)	
		Remote network monitoring (RMON)	

5 Hardware Information

For the version mappings, appearance and structure, port description, indicator description, power supply configuration, heat dissipation, and specifications of the S5700, see the Chassis section in the *S5700 Hardware Description*.

Figure 5-1 shows the logical structure of hardware modules in the switch.

Hardware modules of the switch refer to the interface card, Switch Control Unit (SCU), power supply, and fan.

Figure 5-1 Logical structure of hardware modules
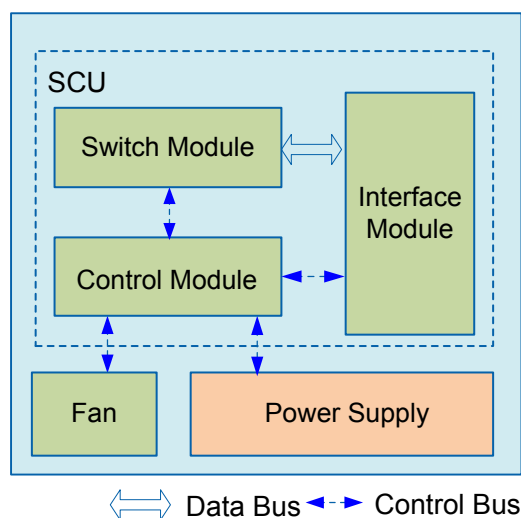
SCU

The SCU is built in the S5700. Each switch has one SCU.

The SCU provides packet switching and device management. It integrates the main control module, switching module, and interface module.

Main Control Module

The main control module provides the following functions:

- Processes protocol packets.
- Manages the system and monitors the system performance according to instructions of the user, and reports the device running status to the user.
- Monitors and maintains the interface module and switching module.

Switching Module

The switching module (switching fabric) is responsible for packet exchange, multicast replication, QoS scheduling, and access control on the interface module of the SCU.

The switching module uses high-performance chips to provide rate-speed forwarding and fast switching of data with different priorities.

Interface Module

The interface module provides Ethernet interfaces for Ethernet service transmission.

Power Supply

For details about S5700-LI-BAT power supply configuration, see the Battery Modules section in the *S5700 Hardware Description*.

For details about power supply configurations on other S5700 switches, see the Power Modules section in the *S5700 Hardware Description*.

Cards

The S5700 supports service and stack cards. Service cards allow for flexible networking and provide cost-effective customized solutions. Stack cards connect multiple switches into one logical switch, which implements on-demand expansion, reduces costs, simplifies management, and improves network reliability.

For details about cards supported by the S5700, see the Cards section in the *S5700 Hardware Description*.

Fan Modules

For details about fan modules in different models, see "Heat Dissipation" under Chassis in the *S5700 Hardware Description*.

Pluggable Modules for Interfaces

For specifications of various pluggable modules for interfaces, see the Pluggable Modules for Interfaces section in the *S5700 Hardware Description*.

6 References

You can download the *Switch Standard and Protocol Compliance List* from the **Huawei official website**.