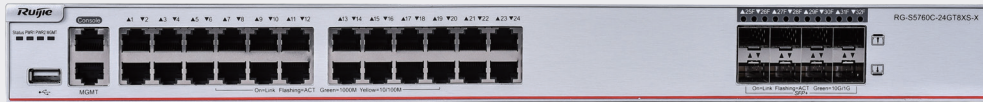# RG-S5760-X Series
Next-Generation High-Performance GE Switches
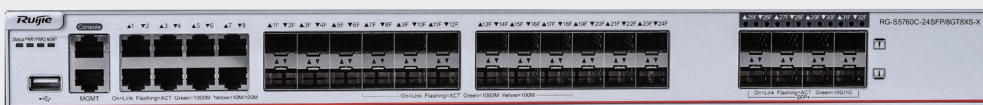
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Product Pictures

RG-S5760C-24GT8XS-X

RG-S5760C-48GT4XS-X

RG-S5760C-24SFP8GT8XS-X

RG-S5760C-48SFP4XS-X

RG-S5760C-48GT4XS-HP-X

Product Overview

The RG-S5760-X series switches are high-performance, large-capacity next-generation switches developed by Ruijie Networks. With next-generation switching chips in the industry and Ruijie Networks RGOS12. X modular operating system, they can provide more entries, faster hardware processing, and better operation experience. They lay a foundation for high-performance networks that support IoT service lifecycle management, mobility applications, and cloud applications.

The RG-S5760-X series switches provide flexible GE access. Each model of the series provides four to eight fixed 10GE optical ports to connect to uplink high-density and high-performance ports, supporting high-density access and high-performance aggregation.

The RG-S5760-X series switches are cost-effective and provide robust performance, sound end-to-end service quality, and rich security functions for the aggregation layer of large-sized networks, the core layer of small - and medium-sized networks, and servers in data centers. They can meet requirements of enterprise networks for high speed, security, and intelligence.

The RG-S5760-X series switches adopt next-generation switching chips and components to ensure stable and sound network operations.

The RG-S5760-X accommodates 48 high-density PoE/PoE+ ports.

With Ruijie's network solution, the RG-S5760-X can uniformly migrate wired and wireless users, and policies. That is, even if a user location is relocated, the RG-S5760-X delivers consistent policy and experience.

Product Highlights

- Automatically isolates multiple service networks with Ruijie's network solution, which is independent of interfaces and locations, and simplifies deployment.
- Securely accesses and isolates IoT terminals and users.
- Allows 100GE ports to be extended and supports high bandwidth scalability of a campus backbone network, coping with service development in the future 10 years.

Product Features

High Performance and Scalability

The RG-S5760-X series switches provide four to eight fixed 10GE optical ports. You can flexibly select switches with different number of 10GE optical ports as needed, meeting requirements of an aggregation device in a large enterprise campus or a core device on a small- or medium-sized network. They support a large amount of entries, and their performance is twice or thrice higher than counterparts.

The RG-S5760-X uses next-generation switching chips in the industry and RGOS12.X modular operating system to provide more entries, faster hardware processing, and better operation experience.

RGOS12.X modular operating system is open and programmable. Basic functions are incorporated into the main version, and custom functions are released in app mode, ensuring stability of the basic functions.

The RG-S5760-X supports the x86 platform, which supports containers, allows third-party management applications to be installed, and makes it easy for customizing functions.

Faults related to processes are rectified online in seconds, without interrupting network operation.

The RG-S5760-X supports Python that allows applications across platforms.

It supports high-speed access to northbound interfaces, with the performance of up to thousands of operations. It can associate with the controller to upgrade the man-machine interface to machine-machine interface.

Functions can be upgraded and extended online to ensure nonstop services.

The RG-S5760-X is fit for a mobile network or an IoT of a large campus where thousands of terminals are deployed. It can automatically isolate multiple service networks, which is independent of interfaces and locations. This simplifies deployment. The RG-S5760-X can securely connect to and isolate IoT terminals and users. Furthermore, its high bandwidth can cope with lossless operation of services on a mobile network or the Internet, achieving service continuity.

IPv4/IPv6 Dual-Stack Multi-Layer Switching

The hardware of RG-S5760-X series switches supports IPv4 and IPv6 stacks and multi-layer line-rate switching, and differentiates and processes IPv4 and IPv6 packets. The switches also provide flexible IPv6 network communication solutions for network administrators to perform network planning or maintain the network status based on various IPv6 network demands. The RG-S5760-X series switches support a wide range of IPv4 routing protocols, including static routing, Routing Information Protocol (RIP), Open Shortest Path First version 2 (OSPFv2), Intermediate System to Intermediate System version 4 (IS-ISv4), and Border Gateway Protocol version 4 (BGP4). You can select routing protocols to suit your network environments and flexibly build networks. They also support abundant IPv6 routing protocols, including static routing, Routing Information Protocol Next Generation (RIPng), OSPFv3, IS-ISv6, and BGP4+. You can select a routing protocol flexibly to either upgrade the existing network to an IPv6 network or build a new IPv6 network.

VSU

The RG-S5760-X series switches support Virtual Switching Unit (VSU) technology. VSU enables multiple physical

devices to be connected through aggregate links and virtualized into one logical device. The physical devices use the same IP address, Telnet process, and CLI for management, and support automatic version check and automatic configuration. VSU improves management efficiency and delivers sound experience.

Aggregate links can use 10GE ports, and the maximum stack bandwidth is 80 Gbps, maximizing the return on investment (ROI).

Simplified management: Administrators can uniformly manage multiple switches, with no need to connect to each switch for configuration and management.

Simplified network topology: A VSU serves as a switch on a network and connects to peripheral devices through aggregate links. In this case, no Layer 2 loop exists, so you do not need to configure the Multiple Spanning Tree Protocol (MSTP). Various control protocols run on the VSU.

Fault rectification within milliseconds: A VSU connects to peripheral devices through aggregate links. If one device or member link in the VSU fails, data and services can be switched to another member link within only 50 ms to 200 ms.

High scalability: User devices can be added to or removed from a virtualized network without affecting normal operation of other devices.

VXLAN

The hardware of RG-S5760-X series switches supports Virtual Extensible LAN (VXLAN). You can use the switches to establish a Layer 2 logical network over a Layer 3 network through software upgrade.

Sound Security Protection Policies

RG-S5760-X series switches effectively defend against virus spread and hacker attacks by using multiple inherent mechanisms such as DoS attack prevention, IP scanning prevention, validity check of ARP packets on interfaces, and multiple hardware-based ACLs.

Hardware-based IPv6 ACLs can easily control access of IPv6 users at the network boundary even if there are IPv6 users on an IPv4 network. The ACLs can allow IPv4 and IPv6 users to coexist and, control access permissions of IPv6 users, for example, restricting access to sensitive resources on a network.

They provide a unique hardware CPU protection mechanism, that is, CPU Protect Policy (CPP). It classifies data traffic sent to the CPU, processes traffic by queue priority, and rate-limits the bandwidth as required. This protection mechanism fully protects the CPU from being occupied by unauthorized traffic, defends against malicious attacks, and prevents resource consumption, to ensure security of the CPU and switch itself.

They employ the innovative Network Foundation Protection Policy (NFPP) technology to rate-limit outgoing ARP packets, ICMP request packets, DHCP Request messages, and other packets to networks. The switch discards packets whose rate exceeds the threshold, identifies attacks, and isolates STAs launching attacks. This protects basic networks against network attacks to guarantee network stability.

The hardware of the switches flexibly binds an interface or switch to a user's IP address and MAC address, to strictly restrict access of users connected to the interface or switch.

DHCP snooping enables the switch to receive DHCP Reply messages only from trusted ports, preventing spoofing from unauthorized DHCP servers. With DHCP snooping, the switch dynamically monitors ARP packets, checks users' IP addresses, and discards unauthorized packets that do not match binding entries. This technology effectively prevents ARP spoofing and source IP address spoofing.

The switches support Telnet-based access control based on source IP addresses, which can prevent unauthorized users and hackers from maliciously attacking and controlling the devices. This enhances network management security of devices.

Through Secure Shell (SSH) and Simple Network Management Protocol version 3 (SNMPv3), the switches can encrypt management information in Telnet and SNMP processes, to ensure information security of management devices, and to prevent hackers from attacking or controlling devices.

The switches reject unauthorized network access, and enables authorized users to use networks properly by employing multi-element binding, port security, time range-based ACL, and rate limit based on data streams. This strictly controls user access to enterprise networks and campus networks, and restricts communication of unauthorized users.

High Reliability

With STP (IEEE 802.1D), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s), the RG-S5760-X achieves fast convergence, improves the fault tolerance capability, and ensures stable network operation and link load balancing. In this way, the RG-S5760-X effectively utilizes network channels to better use redundant links.

The Virtual Router Redundancy Protocol (VRRP) ensures network stability.

With the Rapid Link Detection Protocol (RLDP), the RG-S5760-X can quickly detect link connectivity and unidirectional optical links. You can enable loop detection on an interface to prevent network failures caused by loops when interfaces are connected to unauthorized hubs.

The RG-S5760-X supports the Ethernet Ring Protection Switching (ERPS) technology, which is a Layer 2 link redundancy protocol designed for the core Ethernet. The control device blocks loops and restores links, and non-control devices directly report their link status to the control device, without processing from other non-control devices. Therefore, the loop elimination and restoration time of ERPS is faster than that of STP. ERPS supports link recovery within milliseconds.

When STP is disabled, the Rapid Ethernet Uplink Protection Protocol (REUP) can still provide basic link redundancy and millisecond-level fault rectification faster than STP.

The RG-S5760-X supports Bidirectional Forwarding Detection (BFD), which provides upper-level protocols (such as routing protocols) with a method of rapidly detecting connectivity of the forwarding path between two devices. BFD greatly shortens the convergence time for the upper-level protocols in the case of link status changes.

The RG-S5760-X supports hardware-level dual-boot. It uses two flash chips to store boot software (system boot program) to achieve hardware-level redundancy, and to avoid switch boot failures due to flash chip faults.

Strong Multi-Service Support

The RG-S5760-X supports IPv4 and IPv6 multicast functions as well as multiple multicast protocols, such as IGMP snooping, IGMP, MLD, PIM for IPv4, and PIM for IPv6.

It checks IGMP source ports and source IP addresses to effectively eliminate unauthorized multicast sources, enhancing network security.

It supports abundant Layer 3 features such as equal-cost multi-path routing (ECMP).

Sound QoS Policies

The RG-S5760-X can classify and control various flows, such as MAC flows, IP flows, and application flows, to implement different policies such as fine-grained bandwidth control and forwarding priority. In this way, it provides differentiated services based on applications and characteristics of service quality required by the applications.

It provides QoS guarantee based on the DiffServ model, and can filter traffic based on 802.1p priorities and IP ToS values, and from Layer 2 to Layer 7. It supports SP, WRR, and other QoS policies.

Energy Saving

The RG-S5760-X adopts the next-generation hardware architecture, and advanced energy-efficient circuit design and components, to efficiently reduce energy consumption and noise. It is equipped with variable-speed axial fan modules to intelligently control the fan speed based on the ambient temperature. This reduces power consumption and noise while ensuring stable operation of the switch.

Easy Network Maintenance

The RG-S5760-X supports routine network diagnosis and maintenance based on SNMP, RMON, Syslog, and USB-based backup log and configuration. A network administrator can use various management and maintenance modes such as command line interface (CLI), web network management, and Telnet to facilitate device management.

It supports OpenFlow and NETCONF, and can be upgraded to support software-defined networking (SDN) networks in the future, substantially reducing network maintenance costs while simplifying network management.

Telemetry based on gRPC enables it to periodically collect CPU and memory information.

With simplified optical management software and service template embedded in the S5760C-48SFP4XS-X and S5760C-48GT4XS-HP-X, the two switch models can be deployed quickly. In addition to network service planning, the two switch models support plug and play, zero-touch provisioning (ZTP), and optical link fault detection and alarms.

Product Specifications

Hardware Specifications

Hardware Specifications	RG-S5760C-24GT8XS-X	RG-S5760C-48GT4XS-X	RG-S5760C-24SFP8GT8XS-X	RG-S5760C-48SFP4XS-X	RG-S5760C-48GT4XS-HP-X
Interface Specifications					
Fixed port	24 x 10/100/1000 Mbps electrical ports with auto-negotiation, 8 x 1GE/10GE SFP+ ports, 2 x power supply module slots	48 x 10/100/1000 Mbps electrical ports with auto-negotiation, 4 x 1GE/10GE SFP+ ports, 2 x power supply module slots	24 x 1000 Mbps SFP ports (Ports 1-16 are 100/1000 Mbps SFP ports), 8 x 10/100/1000 Mbps combo ports with auto-negotiation, 8 x 1GE/10GE SFP+ ports, 2 x power supply module slots	48 x 1000 Mbps SFP ports, 4 x 1GE/10GE SFP+ ports, 3 x modular fans, 2 x power supply module slots	48 x 10/100/1000 Mbps electrical ports with auto-negotiation, 4 x 1GE/10GE SFP+ ports, 2 x power supply module slots, supporting PoE/PoE+
Fan module	Two built-in fan modules Fan speed regulating and fault alarms			Three pluggable fan modules	Two pluggable fan modules
Power module	Two power modules The switch can be powered on by either one or dual power modules. If both power modules are used, the switch works in the power redundancy mode.				
Management port	One MGMT port, one console port, and one USB port, compliance with the USB2.0 standard				
Expansion slot	Two expansion slots are reserved for expansion modules and supervisor modules. One expansion slot is reserved on the RG-S5760C-48GT4XS-HP-X and RG-S5760C-48SFP4XS-X.				
System Specifications					
Packet forwarding rate	600Mpps	600Mpps	600Mpps	600Mpps	600Mpps
Switching capacity	7.92Tbps	7.92Tbps	7.92Tbps	7.92Tbps	7.92Tbps
Number of MAC addresses	128,000	128,000	128,000	128,000	128,000
ARP table size	24,000	24,000	24,000	24,000	24,000
Number of IPv4 unicast routes	24,000	24,000	24,000	24,000	24,000

Hardware Specifications	RG-S5760C-24GT8XS-X	RG-S5760C-48GT4XS-X	RG-S5760C-24SFP8GT8XS-X	RG-S5760C-48SFP4XS-X	RG-S5760C-48GT4XS-HP-X
Number of IPv4 multicast routes	4,000 mmu-enhance: 3,000	4,000 mmu-enhance: 3,000	4,000 mmu-enhance: 3,000	4,000 mmu-enhance: 3,000	4,000 mmu-enhance: 3,000
Number of IPv6 unicast routes	14,000	14,000	14,000	14,000	14,000
Number of IPv6 multicast routes	2,000 mmu-enhance: 1,500	2,000 mmu-enhance: 1,500	2,000 mmu-enhance: 1,500	2,000 mmu-enhance: 1,500	2,000 mmu-enhance: 1,500
Number of ACEs	In: 7,000 Out:1,500				
Number of IGMP groups	4,000				
Number of MLD groups	1,000				
Number of VSU members	4				
Dimensions and Weight					
Dimensions (W x D x H)	440 mm x 340 mm x 44 mm (17.32 in. x 13.39 in. x 1.73 in.)			442 mm x 420 mm x 43.6 mm (17.40 in. x 16.54 in. x 1.72 in.)	
Weight	4.4 kg (9.70 lbs)	4.5 kg (9.92 lbs)	4.3 kg (9.48 lbs)	5.3 kg (11.68 lbs)	5.5 kg (12.13 lbs)
CPU and Storage					
CPU	1.2 GHz dual-core CPU				
Storage	Flash memory: 4 GB SDRAM: 1 GB			Flash memory: 4 GB SDRAM: 2 GB	
Data packet buffer	1.2MB				
Power and Consumption					
Maximum power consumption	< 60 W (excluding expansion modules) < 85 W (including expansion modules)	< 70 W (excluding expansion modules) < 95 W (including expansion modules)	< 77 W (excluding expansion modules) < 102 W (including expansion modules)	< 105 W (excluding expansion modules) < 125 W (including expansion modules)	Without PoE load: ≤ 110 W With PoE full load: ≤ 1,590 W

Hardware Specifications	RG-S5760C-24GT8XS-X	RG-S5760C-48GT4XS-X	RG-S5760C-24SFP8GT8XS-X	RG-S5760C-48SFP4XS-X	RG-S5760C-48GT4XS-HP-X
Maximum output power	RG-PA70IB: 70 W RG-PA150I-F: 150 W RG-PA150IB-F: 100 V to 240 V, 150 W RG-PD150IB-F: 48 V DC to 60 V DC, 150 W	RG-PA70IB: 70 W RG-PA150I-F: 150 W RG-PA150IB-F: 100 V to 240 V, 150 W RG-PD150IB-F: 48 V DC to 60 V DC, 150 W	RG-PA150I-F: 150 W RG-PA150IB-F: 100 V to 240 V, 150 W RG-PD150IB-F: 48 V DC to 60 V DC, 150 W	RG-PA150I-F: 150 W RG-PA150IB-F: 100 V to 240 V, 150 W RG-PD150IB-F: 48 V DC to 60 V DC, 150 W	RG-PA600I-P-F: 600 W (PoE: 370 W) RG-PD600I-P-F: 600 W (PoE: 370 W) RG-PA1000I-P-F: 176 V AC to 290 V AC, 1000 W; 90 V AC to 176 V AC, 930 W (PoE: 740 W)
Rated input voltage	AC input Rated voltage range: 100 V to 240 V Frequency: 50 Hz/60 Hz HVDC input: Rated voltage range: 240 V LVDC input: Rated voltage range: 48 V DC to 60 V DC			AC input Rated voltage range: 200 V to 240 V Frequency: 50 Hz/60 Hz DC input: Rated voltage range: 48 V to 60 V	AC input Rated voltage range: 200 V to 240 V Frequency: 50 Hz/60 Hz DC input: Rated voltage range: 48 V to 60 V
Maximum input voltage	AC input Maximum voltage range: 90 V to 264 V HVDC input: Maximum voltage range: 192 V to 288 V LVDC input: Maximum voltage range: 36 V DC to 75 V DC			AC input Maximum voltage range: 176 V to 264 V DC input: Maximum voltage range: 38 V to 75 V	AC input Maximum voltage range: 90 V to 264 V DC input: Maximum voltage range: 36 V to 75 V
Environment and Reliability					
MTBF	120 years	110 years	94 years	90 years	95 years
Primary Airflow	Air intake from left and front panel, and air exhaust from right			Front-to-rear airflow	
Operating temperature	0°C to 45°C (32°F to 113°F) V1.X+M5000X4XS2CQ: 0 to 40°C (32°F to 104°F)			0°C to 45°C (32°F to 113°F)	
Storage temperature	–40°C to +70°C (–40°F to +158°F)				
Operating humidity	10% to 90% (non-condensing)				
Storage humidity	5% to 95% (non-condensing)				
Operating altitude	0 m to +5,000 m (0 ft. to +16404.20 ft.)				
Operating noise	45°C (113°F): 56.2 dB	45°C (113°F): 57.9 dB	45°C (113°F): 57.1 dB	27°C (80.6°F): 50 dB 45°C (113°F): 65 dB	27°C (80.6°F): 53 dB 45°C (113°F): 68 dB

Hardware Specifications	RG-S5760C-24GT8XS-X	RG-S5760C-48GT4XS-X	RG-S5760C-24SFP8GT8XS-X	RG-S5760C-48SFP4XS-X	RG-S5760C-48GT4XS-HP-X
Interface surge protection	Power port: 6 kV Telecom port: 10 kV (MGMT port: 4 kV)				

Software Specifications

RG-S5760-X Series	
Feature	Description
Ethernet switching	Jumbo frame (maximum length: 9,216 bytes)
	IEEE 802.1Q (supporting 4K VLANs)
	Voice VLAN
	Super-VLAN and private VLAN
	MAC address-based, port-based, protocol-based, and IP subnet-based VLAN assignment
	GVRP
	Basic QinQ and selective QinQ
	STP, RSTP, and MSTP
	ERPS (G.8032)
	LLDP/LLDP-MED
	LACP (IEEE 802.3ad)
IP service	ARP
	DHCP client, DHCP relay, and DHCP server
	DHCP snooping
	DNS
	DHCPv6 client, DHCPv6 server, and DHCPv6 relay
	DHCPv6 snooping
	Neighbor Discovery (ND) and ND snooping
	IPV6 addressing, ICMPv6, Stateless Address Auto-configuration (SLAAC), and path MTU discovery

RG-S5760-X Series	
Feature	**Description**
IP routing	Static routing
	RIP and RIPng
	OSPFv2, OSPFv3, IS-ISv4, ISv4, and IS-ISv6
	BGP4 and BGP4+
	ECMP
	IPv4 and IPv6 VRF
	IPv4 and IPv6 PBR
Multicast	IGMP v1/v2/v3 and IGMP proxy
	IGMP v1/v2/v3 snooping
	IGMP filtering and IGMP fast leave
	PIM-DM, PIM-SM, and PIM-SSM
	MSDP
	MLD snooping v1/v2
	PIM-SMv6 and PIM-SSM v6
MPLS	MPLS L3VPN
ACL and QoS	Standard IP ACLs Extended IP ACLs Extended MAC ACLs Time-based ACLs Expert-level ACLs ACL80 IPv6 ACL
	ACL redirection
	Port traffic identification
	Port traffic rate limiting
	Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ
	Congestion avoidance: tail drop, RED, and WRED

RG-S5760-X Series	
Feature	Description
ACL and QoS	802.1p/DSCP/ToS traffic classification Eight priority queues per port
Security	AAA
	RADIUS and TACAS+
	Port-based and MAC address-based 802.1X authentication
	Web authentication
	HTTPS
	SSHv1 and SSHv2
	Global IP-MAC binding
	Port isolation and port security
	IP source guard
	SAVI
	CPP and NFPP
	Strict and loose RPF uRPF ignoring default routes
	3-tuple binding (IP address, MAC address, and port) 3-tuple binding (IPv6 address, MAC address, and port) Filtering of unauthorized MAC addresses MAC address bypass (MAB) authentication Portal authentication and Portal 2.0 authentication ARP check Dynamic ARP Inspection (DAI) ARP packet rate limiting Gateway ARP anti-spoofing Broadcast storm suppression Hierarchical management of administrators and password protection AAA for device login management MAC Authentication Bypass (SSH) BPDU guard Port protection
Reliability	REUP, RLDP, and DLDP
	IPv4 VRRP v2/v3 and IPv6 VRRP
	GR for RIP, OSPF, BGP, and other routing protocols

RG-S5760-X Series	
Feature	**Description**
Reliability	BFD
	Link tracing, fault notification, and remote loopback based on 802.3ah (EFM)
	1+1 power module redundancy
	Hot swapping of power modules and cables
	3-level fan speed adjustment Fan fault alarm
Device virtualization	VSU
NMS and maintenance	SPAN, RSPAN, and ERSPAN
	sFlow
	NTP and SNTP
	FTP and TFTP
	SNMP v1/v2c/v3
	RMON (1, 2, 3, 9)
	SSHv1 and SSHv2
	Syslog
	NETCONF
	CWMP (TR-069)
	gRPC
	CLI (Telnet/Console), SNMP over IPv6, IPv6 MIB support for SNMP, SSHv6, Telnet v6, FTP/TFTP v6, DNS v6, NTP for IPv6, and Traceroute v6
PoE	RG-S5760C-48GT4XS-HP-E: IEEE 802.3af and 802.3at, uninterruptible power supply upon hot start, and port priority
VXLAN	With VXLAN, a Layer 2 logical network can be built based on a Layer 3 network through software upgrade.

Protocol Compliance

RG-S5760-X Series	
Organization	Standards and Protocol
IETF	RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB RFC 1757 Remote Network Monitoring (RMON) RFC 1812 Requirements for IP Version 4 Router RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 1918 Address Allocation for Private Internet RFC 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2571 SNMP Management Frameworks RFC 2863 The Interfaces Group MIB RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3046 DHCP Option82 RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 4022 MIB for TCP RFC 768 User Datagram Protocol (UDP) RFC 783 TFTP Protocol (revision 2) RFC 792 Internet Control Message Protocol (ICMP) RFC 793 Transmission Control Protocol (TCP) RFC 813 Window and Acknowledgement Strategy in TCP RFC 815 IP datagram reassembly algorithms RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol RFC 959 File Transfer Protocol (FTP) RFC 1058 Routing Information Protocol (RIP) RFC 1583 OSPF Version 2 RFC 1981 Path MTU Discovery for IP version 6 RFC 1997 BGP Communities Attribute RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option RFC 2439 BGP Route Flap Damping RFC 2460 Internet Protocol, Version 6 (IPv6) RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 2545 Use of BGP 4 Multiprotocol Extensions for IPv6 Inter Domain Routing RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2865 Remote Authentication Dial In User Service (RADIUS)

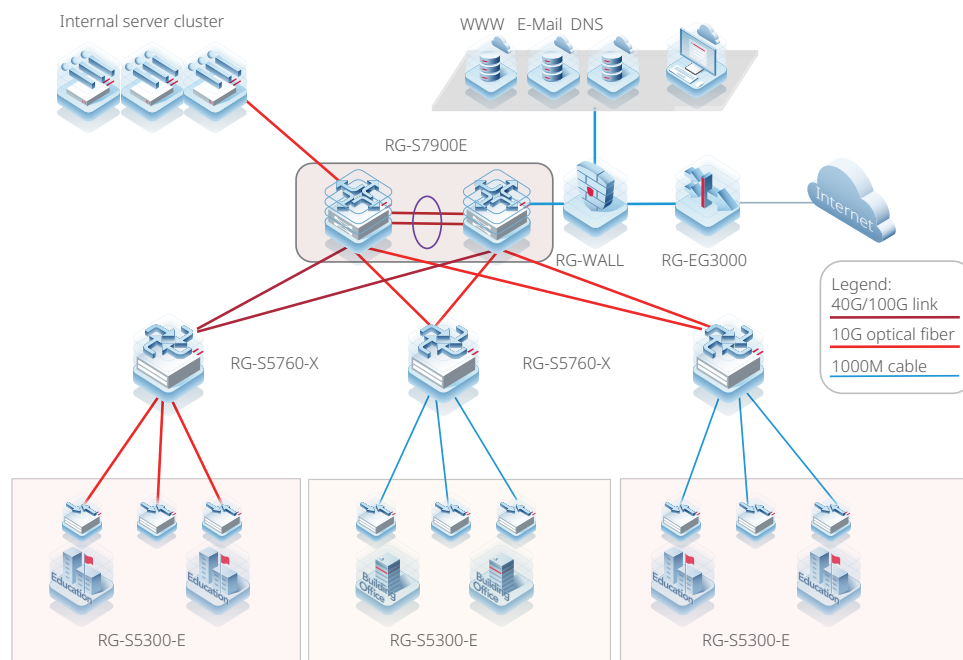| RG-S5760-X Series	
Organization	Standards and Protocol
IETF	RFC 2918 Route Refresh Capability for BGP 4 RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3065 Autonomous System Confederation for BGP RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6 RFC 3973 PIM Dense Mode RFC 4271 A Border Gateway Protocol 4 (BGP 4) RFC 4273 Definitions of Managed Objects for BGP 4 RFC 4360 BGP Extended Communities Attribute RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4486 Subcodes for BGP Cease Notification Message RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4724 Graceful Restart Mechanism for BGP RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4760 Multiprotocol Extensions for BGP 4 RFC 4940 IANA Considerations for OSPF RFC 5065 Autonomous System Confederation for BGP RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6 RFC 5492 Capabilities Advertisement with BGP 4 RFC 6620 FCFS SAVI
IEEE	IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control IEEE 802.1D Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3bt Power over Ethernet
Industry Certificates	Electromagnetic Compatibility (EMC) Standards: CISPR 22/EN 55032 (Conducted and Radiated Emissions) EN 55035 (Immunity) IEC/EN 61000-4-2 or ANSI/ESD S20.20 (Electrostatic Discharge - ESD) IEC/EN 61000-4-3 (Radio Frequency Electromagnetic Field) IEC/EN 61000-4-4 (Electrical Fast Transient -EFT) IEC/EN 61000-4-5 (Surge Immunity) IEC/EN 61000-4-6 (Radio Frequency Common Mode) IEC/EN 61000-4-11 (Voltage Dips and Interruptions) IEC/EN 61000-3-2(Voltage Dips and Interruptions)

RG-S5760-X Series	
Organization	Standards and Protocol
Industry Certificates	IEC/EN 61000-3-2 (Voltage Dips and Interruptions) • Safety Standards: IEC 60950/EN 62368 IEC 60068 RoHS or WEEE (Environmental)

Typical Applications

- The switches can be deployed at the aggregation layer of large-sized networks, the core layer of medium- and small-sized networks, the access layer of server groups, and Layer 3 access of all 1000 Mbps ports in large enterprises or office buildings in campuses.
- Each model of the series provides four to eight fixed 10GE optical ports to meet user requirements for smoothly upgrading uplinks connected to the backbone network to 10GE uplinks, maximizing the return on investment for users.
- Abundant security management mechanisms provide robust network security defense, high-security access control, and effective network access control.
- Sound management policies can be configured to manage bandwidth to guarantee the bandwidth required by key services such as voice, multicast audio and video services, and Video on Demand (VoD).

Scenario 1

The RG-S5760-X series switches serve as aggregation switches on a large-sized campus network. The switches provide high-performance 10G bandwidth links from the aggregation layer to the core layer, and deliver higher bandwidth for access devices, to cope with increasing information amount of access users.

Scenario 2

The RG-S5760-X series switches serve as core switches on small- and medium-sized enterprise networks. The switches simplify the network architecture through VSU technology and substantially improves reliability and efficiency of the network system.
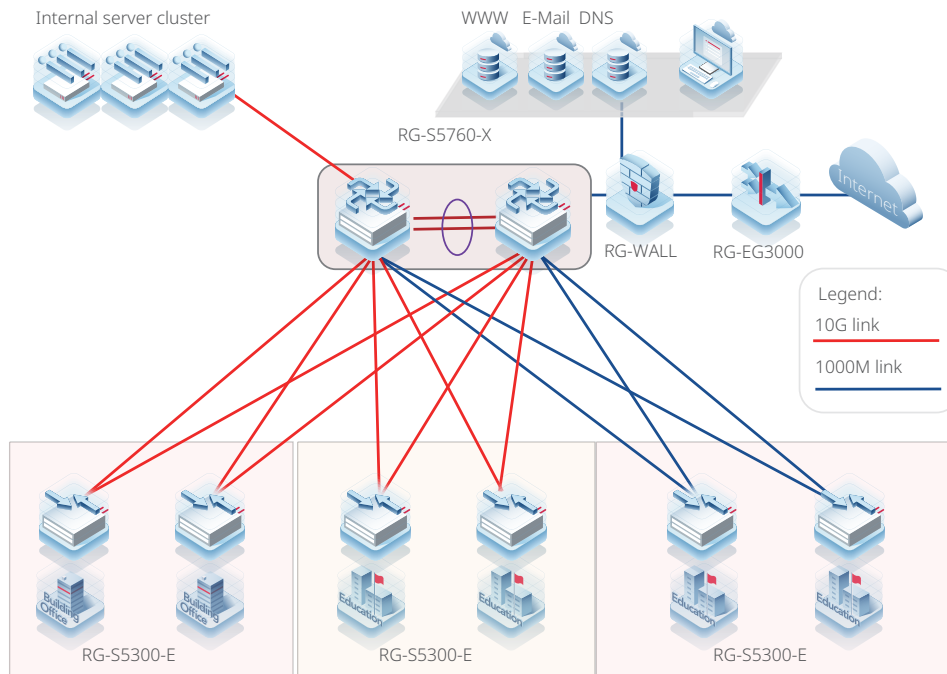
Ordering Guide

Follow the steps to order the RG-S5760-X series switches:
- Select a switch and expansion modules based on port requirements.
- Select power modules.
- Select optical modules based on port requirements.

Note: The item marked with the asterisk (*) in Ordering Information will be available in the future.

Ordering Information

Order switches, expansion modules, power modules, and other components as needed. Before ordering an expansion module or power module, contact our online customer service team for the latest support information about the module.

Power Modules

Model	Description
RG-S5760C-24GT8XS-X	24 x 10/100/1000 Mbps electrical ports with auto-negotiation, 8 x 1GE/10GE SFP+ ports, 1 x expansion slot, 2 x built-in fixed fans, 2 x power module slots Purchase at least one RG-PA150IB-F module.

Model	Description
RG-S5760C-48GT4XS-X	48 x 10/100/1000 Mbps electrical ports with auto-negotiation, 4 x 1GE/10GE SFP+ ports, 1 x expansion slot, 2 x built-in fixed fans, 2 x power module slots (Purchase at least one RG-PA150IB-F module.)
RG-S5760C-24SFP8GT8XS-X	24 x 10/100/1000 Mbps SFP ports (Ports 1-16 are 100/1000 Mbps SFP ports), 8 x 10/100/1000 Mbps combo ports with auto-negotiation, 8 x 1GE/10GE SFP+ ports, 1 x expansion slot, 2 x built-in fans, 2 x power module slots (Purchase at least one RG-PA150IB-F module.)
RG-S5760C-48SFP4XS-X	48 x 1000 Mbps SFP ports, 4 x 1GE/10GE SFP+ ports, 1 x expansion slot, 3 x modular fans, 2 x power module slots Purchase at least one RG-PA150IB-F module.
RG-S5760C-48GT4XS-HP-X	48 x 10/100/1000 Mbps electrical ports with auto-negotiation, 4 x 1GE/10GE SFP+ ports, 1 x expansion slot, 2 x modular fans, 2 x power module slots Purchase at least one RG-PA600I-P-F/RG-PA1000I-P-F/RG-PD600I-P-F module.
M5000X-4XS2CQ	4 x 10GE SFP+ ports and 2 x 100GE QSFP28 ports
M5000X-4QXS*	4 x 40GE QSFP+ ports
RG-PA150IB-F	150 W AC power module
RG-PA600I-P-F	600 W PoE AC power module
RG-PA1000I-P-F	1000 W PoE AC power module
RG-PD600I-P-F	600 W PoE DC power module

Optical Modules

Model	Description
Mini-GBIC-GT	1000BASE-GT mini GBIC module
MINI-GBIC-SX-MM850	Single-port 1000BASE-SX mini GBIC module (LC connector)
MINI-GBIC-LX-SM1310	Single-port 1000BASE-LX mini GBIC module (LC connector)
MINI-GBIC-LH40-SM1310	Single-port 1000BASE-LH mini GBIC module (LC connector), supporting a transmission distance of 40 km (24.85 miles)
MINI-GBIC-ZX50-SM1550	Single-port 1000BASE-ZX mini GBIC module (LC connector), supporting a transmission distance of 50 km (24.85 miles)
MINI-GBIC-ZX80-SM1550	Single-port 1000BASE-ZX mini GBIC module (LC connector), supporting a transmission distance of 80 km (24.85 miles)
MINI-GBIC-ZX100-SM1550	1000BASE-ZX mini GBIC module, supporting a transmission distance of 100 km (62.14 miles)

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Model	Description
XG-SFP-SR-MM850	10GE LC module (62.5/125 µm: 33 m (108.27 ft.); 50/125 µm: 66 m (216.54 ft); transmission for 300 m (984.25 ft.) when modal bandwidth is 2000 MHz*km), applicable to SFP+ ports
XG-SFP-LR-SM1310	10GE LC interface module (1310 nm), 10 km (6.21 miles), applicable to SFP+ ports
XG-SFP-ER-SM1550	10GE LC interface module (1550 nm), 40 km (24.85 miles), applicable to SFP+ ports
XG-SFP-AOC1M	10GE SFP+ optical cable, 1 m (3.28 ft.), including one cable and two interface modules
XG-SFP-AOC3M	10GE SFP+ optical cable, 3 m (9.84 ft.), including one cable and two interface modules
XG-SFP-AOC5M	10GE SFP+ optical cable, 5 m (16.40 ft.), including one cable and two interface modules

Warranty

For more information about warranty terms and period, contact your local sales agency:

● Warranty terms: *https://www.ruijienetworks.com/support/servicepolicy*
● Warranty period: *https://www.ruijienetworks.com/support/service_41*

Note: The warranty terms are subject to the terms of different countries and distributors.

More Information

For more information about Ruijie Networks, visit the official Ruijie website or contact your local sales agency:

● Ruijie Networks official website: *https://www.ruijienetworks.com/*
● Online support: *https://www.ruijienetworks.com/support*
● Hotline support: *https://www.ruijienetworks.com/support/hotline*
● Email support: *service_rj@ruijienetworks.com*

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