



Switch
Switch

RG-S5750-E Series

Switches Datasheet

RG-S5750-E Series Switches Datasheet



RG-S5750-24GT/8SFP-E



RG-S5750-48GT/4SFP-E



RG-S5750-24GT/8SFP-P (AC/DC)



RG-S5750-48GT/4SFP-P (AC/DC)



RG-S5750-24SFP/8GT-E

Product Overview

The Ruijie RG-S5750-E Series is a collection of new-generation Layer 3 switches offering high performance, advanced security, and multiservices. The Ruijie RG-S5750-E Series provides flexible media interfaces to meet connection needs of different media in network construction.

With full Gigabit interface form, scalable high-density 10 Gigabit Ethernet ports, and 1:1 multilayer switching at full line rates, this series is ideal acting as the aggregation layer of a large network, fulfilling the demanding requirements of high bandwidth, performance and scalability, and also acting as the core layer of a medium-sized network, and access of the server cluster of a data center.

The Ruijie RG-S5750-E Series provides hardware support for IPv4/IPv6 switching at line rates and support rich tunnel technologies for communication between IPv6 networks. This series can be used in pure IPv4 networks, IPv6 networks, and IPv4/IPv6 dual-stack networks and meet the requirements of current and future campus network for transition from IPv4 to IPv6.

The Ruijie RG-S5750-E Series delivers Layer 2 to 7 traffic classifications and advanced Quality of Service (QoS) policies. The series also processes different service flows based on different applications to ensure zero delay in critical data transmission.

The Ruijie RG-S5750-E Series offers flexible interface combination and configuration, providing 24 or 48 adaptive 10/100/1000M electrical ports as well as 4 or 8 SFP 10/100M optical ports to adapt to various network construction scenarios.

The Ruijie RG-S5750-E Series offers outstanding performance, advanced end-to-end QoS, high flexibility, superior security settings, and policy-based network management with an unparalleled price to performance ratio to meet the enterprise customers' needs of high speed, robust security, and intelligent network automation.

I Product Features

High Performance

- The Ruijie RG-S5750-E Series offers 10 Gigabit Ethernet ports to ensure the smooth traffic flowing, even at 10 times the normal network speed. The series meets the needs of fast growing network applications and increasing network bandwidth.
- Offers upgradable 10 Gigabit Ethernet ports to meet current and future demands.

IPv4/IPv6 Multilayer Switching

- Provides hardware support for IPv4/IPv6 multilayer switching at line rates, supports distinction and processing of IPv4 and IPv6 packets by hardware, and provides flexible IPv6 network communication schemes according to requirement planning and network status of the IPv6 network.
- Supports rich IPv4 routing protocols, including static routing protocols, RIP, OSPF, and BGP4, which enable users to select appropriate protocols for network building in different environments.
- Supports rich IPv6 routing protocols, including static routing protocols, RIPng, OSPFv3, and BGP4+, which enable users to select appropriate protocols for upgrading an existing network to an IPv6 network or building a new IPv6 network.

Network Virtualization Support

- Up to 8 switches can be virtualized into one logical unit.
- Switches operation management can be unified and simplified through single IP address, Telnet and CLI session.
- Enables any Virtual Switch Unit (VSU) member to leave or join the VSU group with zero business interruption, offering high reliability and availability.
- Provides high degree of flexibility; can be realized with either Gigabit Ethernet or 10 Gigabit Ethernet ports without limitation on copper or fiber media types.
- Aggregates up to 8 Gigabit Ethernet ports or 4 10 Gigabit Ethernet ports as the VSU Link.

Flexible and Comprehensive Security Policies

- Effectively prevents and controls virus spread and hack attacks with various inherent mechanisms, such as anti-DoS attacks, hacker IP scanning, illegal ARP packets checking and multiple hardware ACL policies.
- Supports hardware-based IPv6 ACL. Allows coexistence of IPv4/IPv6 users and controls the resources access by IPv6 users.
- Industry-leading CPU protection mechanism: The CPU protection policy (CPP) distinguishes the data flows sent to the CPU, which are processed according to their priorities, and implements the limitation on the bandwidth rate as needed. In this manner, users can prevent the CPU from being occupied by illegal traffic and protect against malicious attacks to guarantee normal operation of the CPU and switch.
- Implements flexible binding of a port or the system to the IP address and MAC address of users, strictly limiting user access on a port or in the entire system.
- Supports DHCP snooping, and allows DHCP responses from trusted ports only. Based on DHCP listening and by monitoring ARP dynamically and checking the user IP address, the series directly discards illegal packets inconsistent with binding entries to effectively prevent ARP frauds and source IP address frauds.
- Telnet access control based on the source IP address to prevent illegal personnel or hack attacks and strengthen the device security.
- Secure Shell (SSH) and Simple Network Management Protocol v3 (SNMPv3) cryptographic network protocol ensure the security of management information and provides services such as multi-element binding, port security, time-based ACL and bandwidth rate limiting to block unauthorized users.

Superior Multiservice Support Features

- Supports IPv4 and IPv6 multicast functions, including rich multicast protocols such as IGMP Snooping, IGMP, MLD, PIM, PIM for IPv6, and MSDP, to provide multicast service support for IPv4 networks, IPv6 networks, and IPv4/IPv6 dual-stack networks. Supports the Internet Group Management Protocol (IGMP) source port checking and source IP address checking to guard against illegal multicast sources and improve network security.
- Supports rich Layer 3 service features such as Equal-cost Multipath routing (ECMP) and Weighted-cost Multipath routing (WCMP) to meet communication needs of different link planning.
- Supports IPFIX (RFC 3917) traffic analysis protocol, providing in-depth network flow information for operation management and troubleshooting support.

Advanced QoS Policies

- Supports multilayer traffic classification and flow control capabilities such as MAC traffic, IP traffic, and application traffic that implement multiple traffic policies such as refined bandwidth control and forwarding priorities; supports the provision of services according to the corresponding QoS level.
- The QoS guarantee system with DiffServ at its core supports complete QoS policies such as 802.1p, IP TOS, Layers 2 through 7 filter, SP, and WRR.

High Reliability

- Supports Spanning Tree Protocols (STP) of 802.1d, 802.1w, and 802.1s to ensure rapid convergence, improve fault tolerance capabilities, ensure stable running of networks and load balancing of links, and provide redundant links.
- Supports the Virtual Router Redundant Protocol (VRRP) to effectively ensure network stability.
- Supports Rapid Link Detection Protocol (RLDP) to detect the connectivity of links and whether an optical fiber link is normal from both ends, and supports the loop detection function based on the port to prevent network faults caused by loops generated by the connection of devices such as hubs to ports.
- Supports Rapid Ethernet Ring Protection Protocol (RERP), a Layer 2 redundancy protocol designed for the core Ethernet. Its loop blocking and link recovery are performed on the master device, and a non-master device reports its link status to the master device without processing by other non-master devices. Therefore, the loop blocking time and link recovery time are shorter than those in the case of STP. Based on the preceding differences, the link recovery capability of RERP can reach a 100-subsecond level in an ideal environment.
- When STP is disabled, the Rapid Ethernet Uplink Protection Protocol (REUP) can provide basic link redundancy through the rapid uplink protection function and provide faster subsecond-level fault recovery than STP.
- Supports Bidirectional Forwarding Detection (BFD) to provide a method for upper-layer protocols such as routing protocols and MPLS to rapidly detect the connectivity of forwarding paths between routing devices, reducing the convergence time of upper-layer protocols greatly in the case of changes in link status.

Ease of Use and Management

- Various types of Gigabit Ethernet interfaces meet different network requirements.
- The RG-S5750-24GT/8SFP-P and RG-S5750-48GT/4SFP-P switches support PoE, which can provide power through remote PoE devices. The switches meet the network requirements of financial institutions, enterprises, schools, hospitals, and factories for implementing network applications such as VoIP, remote monitoring, and wireless APs.
- Network Timing Protocol (NTP) provides an accurate and consistent timestamp for traffic information analysis and fault diagnosis.
- Supports Syslog for effective network maintenance and management.
- Supports port mirroring to ease the maintenance workload.
- The CLI interface provides convenience for advanced users.

Technical Specifications

Model	RG-S5750-24GT/8SFP-E	RG-S5750-48GT/4SFP-E	RG-S5750-24SFP/8GT-E	RG-S5750-24GT/8SFP-P	RG-S5750-48GT/4SFP-P
Ports	24 10/100/1000 Base-T Ports, 8 GE SFP Combo Ports, 1 USB 2.0	48 10/100/1000 Base-T Ports, 4 GE SFP Combo Ports, 1 USB 2.0	24 GE SFP Ports, 8 10/100/1000 Base-T Combo Ports, AC, 2 Power Slots, 1 USB 2.0	24 10/100/1000 Base-T (PoE+) Ports, 8 GE SFP Combo Ports, 2 Power Slots, AC/DC	48 10/100/1000 Base-T (PoE+) Ports, 4 GE SFP Combo Ports, 2 Power Slots, AC/DC
Expansion Slots	2 Expansion Slots (Stack or Uplink)				
Switching Capacity	256Gbps				
Packet Forwarding Rate	155Mpps	191Mpps	155Mpps	155Mpps	191Mpps
RPS	Support (External)	Support (External)	Support (External)	Support (External)	Support (External)
VLAN	4K 802.1q VLAN, Super VLAN, Protocol VLAN, Private VLAN, Voice VLAN, MAC-based VLAN, QinQ				
MAC Address	16K				
QinQ	Support transparent transmission of double-tagged packets Select outer VLAN ID based on port, inner VLAN ID and traffic characteristic Determine an outer tag according to the priority of an inner tag For double-tagged packets, support the change to outer VLAN ID information based on an outer/inner VLAN ID				
Link Aggregation	Support LACP (802.3ad)				
Port Mirroring	Support many-to-one mirroring Support flow-based mirroring				
Spanning Tree Protocol	Support STP, RSTP, and MSTP				
Jumbo Frame	Support				
DHCP	DHCP/BOOTP Client, DHCP Server, DHCP Relay, DHCP Snooping, DHCP Snooping Trust				
VSU	Support (Up to 8 Stack Members)				
Basic IPv6 Protocols	IPv6 addressing, Neighbor Discovery Protocol (NDP), ICMPv6, stateless automatic configuration, and Path MTU Discovery				
IPv6 Routing Protocols	Static routes, RIP, RIPng, OSPF, OSPFv3, BGP, BGP4+, equal-cost routes (ECMP), packet-based load balancing, flow-based load balancing, MPLS MCE				
IPv6 Tunnel Features	Manual tunnel, ISATAP tunnel, 6to4 tunnel, IPv6 over IPv4 tunnel, and IPv4 over IPv6 tunnel				
Multicast	IGMPv1, IGMPv2, IGMPv3, and IGMP proxy, IGMPv1 Snooping, IGMPv2 Snooping, and IGMPv3 Snooping, IGMP filter and IGMP fast leave, IGMP IVGL, Source IP check, IGMP SVGL, PIM-DM, PIM-SM, and PIM-SSM, MLD Snooping and MLD, MLD Proxy, MSDP, PIM for IPv6, PIM-SM v6				

Model	RG-S5750-24GT/8SFP-E	RG-S5750-48GT/4SFP-E	RG-S5750-24SFP/8GT-E	RG-S5750-24GT/8SFP-P	RG-S5750-48GT/4SFP-P
MPLS Features	L3VPN, PE function, and MCE function				
G.8032	Support				
ACL	Support various hardware ACLs, Standard IP ACL (hardware ACL based on IP addresses), Extended IP ACL (hardware ACL based on the IP address and TCP/UDP port number), Extended MAC ACL (optional Ethernet-type hardware ACL based on the source MAC address and destination MAC address), Expert-level ACL (hardware ACL based on random combination of the VLAN number, Ethernet type, MAC address, IP address, TCP/UDP port number and protocol type), VLAN-based ACL, Egress ACL, ACL logging, ACL Remark				
QoS	Traffic identification of ports, 802.1p/DSCP/TOS traffic classification, 8 queues with different priorities for each port, PQ, RR, PQ+RR, traffic shaping, rate limiting, hierarchical QoS				
High Reliability Design	Upgrade software during running, accelerate the restart process, BFD cooperates with RIP/OSPF/BGP, LDP, PBR, GR (Graceful Restart), DLDP				
Security Features	Support the binding of the IP address, MAC address, and port address, the binding of the IPv6, MAC address, and port address, security channels, anti-gateway frauds Limit the number of MAC addresses learned by a port Filter illegal MAC addresses Support ARP check under both dynamic address allocation policy and static address allocation policy, DAI, the prevention of setting a DHCP server without permission, hierarchical management by administrators and password protection, AAA security authentication (IPv4/IPv6) in device login management, IP source alarm, control plane protection, 802.1x (Port-based, MAC-based, dynamic VLAN, dynamic ACL, guest VLAN, MAB), web portal, DoS protection, restriction on the rate of ARP packets, suppression of broadcast storms and of multicast storms, SSH v2.0, TACACS+ and specifying of source IP addresses, RADIUS (RADIUS, EXEC authorization, and specified source IP address), BPDU Guard, NFPP, CPP, LLDP and LLDP-MED				
Management Modes	SNMPv1/v2c/v3, CLI (Telnet/Console), RMON (1, 2, 4, 9), SSH, Syslog, NTP/ SNTP, SNMP over IPv6, IPv6 MIB support for SNMP, SSHv6, Telnetv6, FTP/ TFTPv6, DNS v6, NTP for v6, Traceroute v6, HTTPS, Web management				
Other Protocols	FTP, TFTP, DNS client, DNS static				
Dimensions (W x D x H) (mm)	440×260×44	440×300×44	440×300×44	440×400×44	440×420×44
Rack Height	1RU				
Weight (Excluding Expansion Modules)	3.9kg	4.4kg	4kg	7.3kg	8kg
MTBF	>200K hours				

Model	RG-S5750-24GT/8SFP-E	RG-S5750-48GT/4SFP-E	RG-S5750-24SFP/8GT-E	RG-S5750-24GT/8SFP-P	RG-S5750-48GT/4SFP-P
Power Consumption	Nominal voltage: 100-240V Maximum voltage: 90-264VAC Frequency: 50-60Hz		Nominal voltage: 100-240V Maximum voltage: 90-264VAC Frequency: 50-60Hz		Nominal voltage: 100-240V Frequency: 50-60Hz
Temperature	Operating temperature: 0°C to 50°C Storage temperature: -40°C to 70°C				
Humidity	Operating humidity: 10% to 90%RH Storage humidity: 5% to 90%RH				

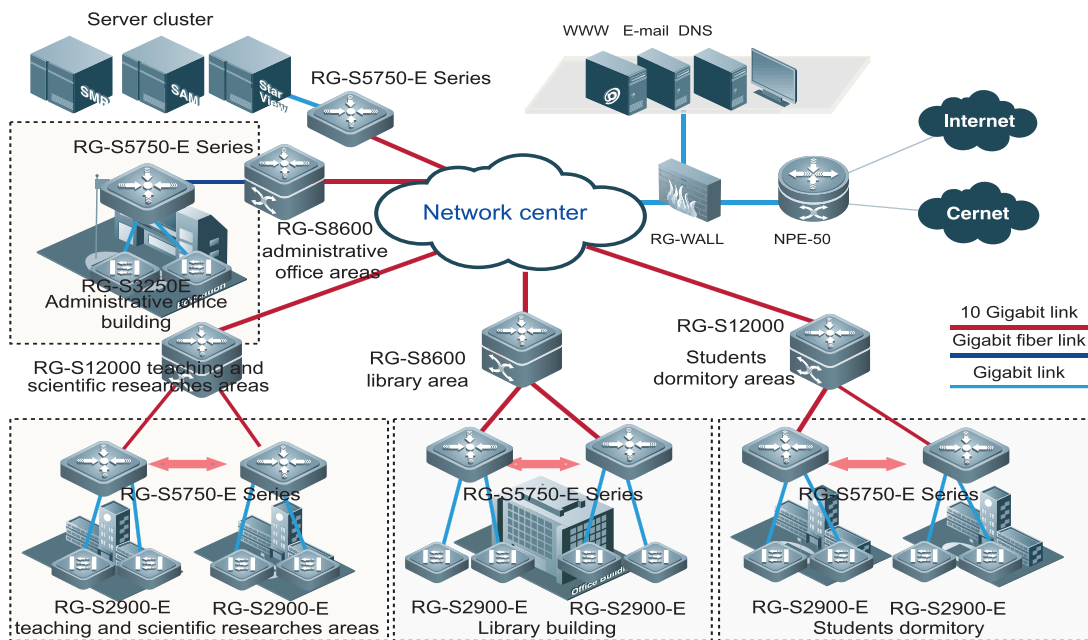
Technical Specifications for RG-M5000E-DC500P

Power Supply Module	RG-M5000E-DC500P
Compatible Model	RG-S5750-24GT/8SFP-P RG-S5750-48GT/4SFP-P
DC Input Voltage Range	-32 VDC to -72 VDC
Power Supply Output	500W including 370W for PoE power supply For dual power supply, the available power supply wattage for PoE is 740W
Hot-swapping Capability	Support
Power Supply Redundancy	Support 1+1 redundancy
Overvoltage Protection	54V: -58V to -66V 12V: 13.2V to 15.6V
Overcurrent Protection	54V: 7.8A to 10A 12V: 11A to 14A
Overheat Protection	Support
Current Sharing	Support
Mixed Power Operation	Support mixed power operation with RG-M5000E-AC500P power supply module
Weight	1.6kg

Typical Applications

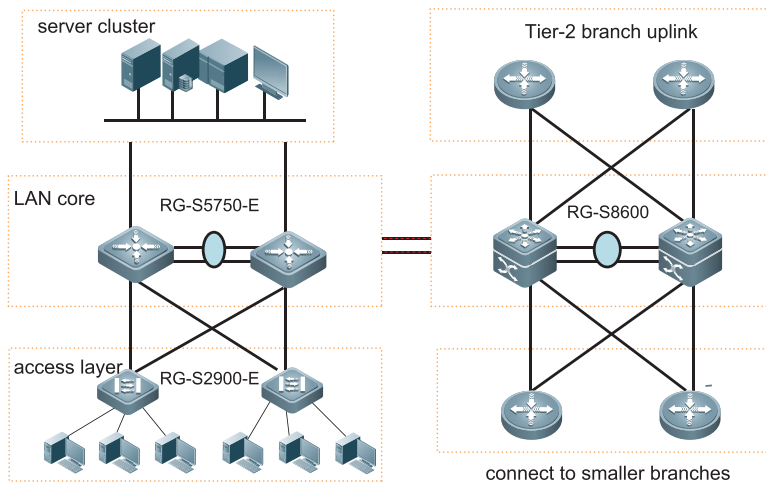
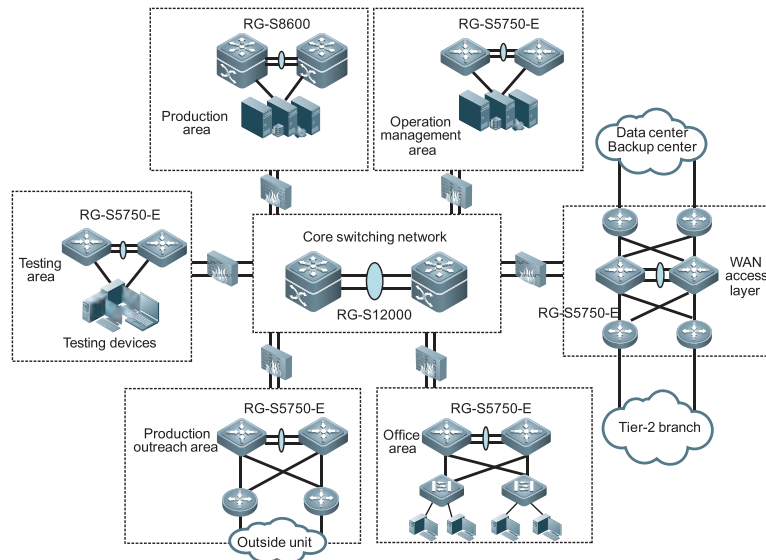
- Aggregation layer of a large network, core layer of medium-sized network, access of a server cluster, and full Gigabit Layer 3 access of buildings in large enterprise or campus networks.
- A network can be upgraded to a 10 Gigabit Ethernet uplink backbone by adding 10 Gigabit Ethernet modules so as to protect end-user investment.
- Scenarios require flexible Gigabit port formation and quantity, high-performance multilayer switching and data processing.
- Strong security management mechanisms provide network security defense, high-security access control, and effective network access control.
- Superior management policies facilitate bandwidth management and ensure the performance of key applications such as voice/video conference, music and video streaming and Video on Demand (VoD).

Typical Application 1: 10 Gigabit Ethernet Backbone Campus Network



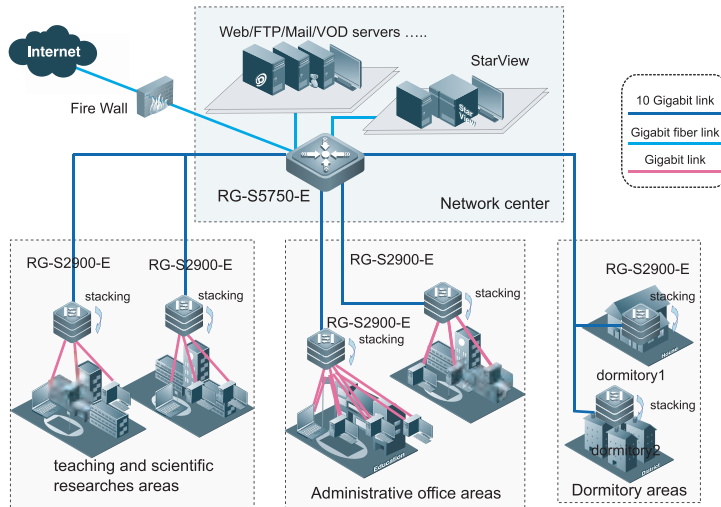
Deployed in teaching and scientific research buildings, library and student dormitories, the RG-S5750-E Series is connected to access switches with Gigabit downlinks and to core switches with Gigabit uplinks, providing high-performance 10 Gigabit Ethernet backbone links and meeting the needs of high data traffic and large number of network nodes.

Typical Application 2: Secure Financial LAN



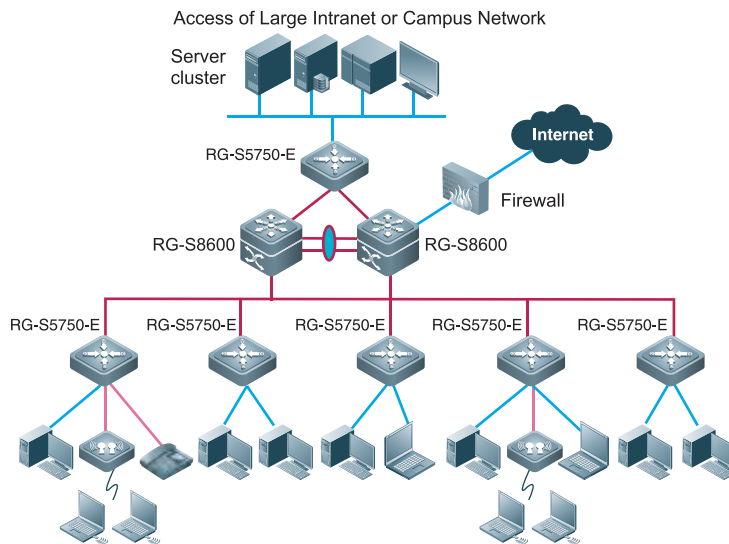
Division of functional modules and powerful security protection provided by the RG-S8600, RG-S7800, and RG-S5750-E can meet the tier 1 financial branch requirements for information systems. Establishing an integrated network security system in cooperation with data center, complete network security projects can be implemented within the tier 1 branches.

Typical Application 3: Core Switch for SME Network



The secure and intelligent 10 Gigabit Ethernet multilayer switch RG-S5750-24GT/8SFP-E is able to function as core switch with high backplane bandwidth and line-rate forwarding that meets application needs of primary and secondary schools, and small to medium-sized enterprises. Additionally, the Gigabit interfaces (24 Gigabit electrical ports and 8 Combo fiber ports) enable flexible connection to switches and servers.

Typical Application 4: Access of Large Intranets or Campus Networks



The Ruijie RG-S5750-E Series Switches can be connected to the multiservice IPv6 core routing switch RG-S8600 Series through 10 Gigabit Ethernet or Gigabit uplinks, while the core devices are connected to one another through a 10 Gigabit Ethernet link or multiple converged Gigabit links. This connection provides seamless expansion of ports and flexible expansion of networks.

Ordering Information

Model	Description
RG-S5750-24GT/8SFP-E	RG-S5750-24GT/8SFP-E Ethernet Switch, 24-Port 10/100/1000Base-T, 8 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0
RG-S5750-48GT/4SFP-E	RG-S5750-48GT/4SFP-E Ethernet Switch, 48-Port 10/100/1000Base-T, 4 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0
RG-S5750-24SFP/8GT-E	RG-S5750-24SFP/8GT-E Ethernet Switch, 24 GE SFP Ports, 8-Port 10/100/1000 Base-T Combo Ports, 2 Extension Slots (Stack or Uplink), 2 Slots for Power Supply, 1 USB 2.0
RG-S5750-24GT/8SFP-P	RG-S5750-24GT/8SFP-P, 24-Port 10/100/1000Base-T (PoE+), 8 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 2 Slots for Power Supply, AC/DC
RG-S5750-48GT/4SFP-P	RG-S5750-48GT/4SFP-P, 48-Port 10/100/1000Base-T (PoE+), 4 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 2 Slots for Power Supply, AC/DC
RG-M5000E-AC500P	Power Supply Module, for S57 PoE series switches, 500W AC, 370W for PoE
RG-M5000E-DC500P	Power Supply Module, only for S5750-P series switches, DC
RG-M5000E-AC60	Power Supply Module, only for RG-S5750-24SFP/8GT-E, 60W AC
M5000E-02SFP/GT	M5000E Interface Module, 2-Port 10/100/1000Base-T, 2 GE SFP Combo Ports
M5000E-01XS	M5000E Interface Module, 1-Port 10GE (SFP+)
M5000E-02XS	M5000E Interface Module, 2-Port 10GE (SFP+)
RPS150	Redundant Power System, for S5750 Series Switches, include 1 RPS Cable
CAB-RPS-1.5M	Redundant Power Supply Cable, 1.5m
FE-SFP-LH15-SM1310	100BASE-LH, SFP Transceiver, SM (1310nm, 15km, LC)
FE-SFP-LX-MM1310	100BASE-LX, SFP Transceiver, MM (1310nm, 2km, LC)
Mini-GBIC-SX	1000BASE-SX, SFP Transceiver, MM (850nm, 550m, LC)
Mini-GBIC-LX	1000BASE-LX, SFP Transceiver, SM (1310nm, 10km, LC)
Mini-GBIC-GT	1000BASE-TX, SFP Transceiver (100m)
Mini-GBIC-LH40	1000BASE-LH, SFP Transceiver, SM (1310nm, 40km, LC)
Mini-GBIC-ZX50	1000BASE-ZX, SFP Transceiver, SM (1550nm, 50km, LC)
Mini-GBIC-ZX80	1000BASE-ZX, SFP Transceiver, SM (1550nm, 80km, LC)
Mini-GBIC-ZX100	1000BASE-ZX, SFP Transceiver, SM (1550nm, 100km, LC)
XG-SFP-SR-MM850	10GBASE-SR, SFP+ Transceiver, MM (850nm, 300m, LC)
XG-SFP-LR-SM1310	10GBASE-LR, SFP+ Transceiver, SM (1310nm, 10km, LC)
XG-SFP-ER-SM1550	10GBASE-LR, SFP+ Transceiver, SM (1550nm, 40km, LC)
XG-SFP-CU1M	10GBASE-CU SFP+ Cable 1 Meter
XG-SFP-CU3M	10GBASE-CU SFP+ Cable 3 Meter
XG-SFP-CU5M	10GBASE-CU SFP+ Cable 5 Meter



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