



RG-S5750-S Series

Security Intelligent Switches Datasheet

Ruijie Networks Co.,Ltd

For further information, please visit our website <http://www.ruijienetworks.com>

Product Overview

RG-S5750-S is a new series switches that integrated security, intelligent and 10 Gigabit Ethernet. It is very suitable for application scenarios such as the aggregation or access layer of a campus network and the access layer for data center server cluster network. Through the VSU (Virtual Switching Unit) technology the user can improve the stability and simplicity of network management.

By leveraging the flexible Gigabit Ethernet and 10 Gigabit Ethernet uplink ports, the customer investment can be protected with constantly software upgrades according to the ever changing network and application requirements.

Ruijie RG-S5750-S series includes the following models:

- RG-S5750-24GT/8SFP-S/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-S/48-Port 10/100/1000Base-T, 4 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0

Product Features

Flexible Port

- Gigabit Ethernet access port and 10 Gigabit Ethernet uplink.
- Enable users to select copper or fiber port for different usage.
- Supports 10 Gigabit Ethernet port that improve the bandwidth between convergence layer and core layer to fulfill bandwidth hungry applications like video, voice and data.

VSU (Virtual Switch Unit)

- 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.
- Designed with high reliability and availability, zero business interruption while any VSU member leaving or joining into the VSU group.
- Aggregates up to 8 Gigabit Ethernet ports or 4 10 Gigabit Ethernet ports as VSU link.

Flexible and Comprehensive Security Policies

- Abundant ACL resource enables deployment of complex security control policy to built a secure network environment.
- Supports the Network Foundation Protection Policy (NFPP) that combines network attack detection and prevention. It executes security policies from the hardware before network attacks are waged by isolating attacking sources.
- Adopts the CPU Protect Policy (CPP) technology, an industry-leading hardware-based CPU protection technology that automatically control and manage traffic of multi-layer protocol packets such as IPv4/IPv6. Besides, it limits the traffic throughput to prevent abnormal packets

from attacking the CPU and consuming resources. In this way, it ensures the stability of core devices' CPUs in IPv4/IPv6 L3 network and L2 network environments.

- Provides 802.1X authentication based on port or MAC, as well as Guest VLAN function that limit the resources accesibility. Provides an unique bypass function while the authenticationserver failure.
- Supports flexible Web authentication (alternative for the users) .

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 an IPv6 network.
- Provides Layer 3 routing protocol including Static, RIP, RIPng routing protocol or dynamic protocol based on user network requirements.
- Supports Equal-cost Multipath routing (ECMP) and Policy Based Routing (PBR) policy layer 3 features to meet various network requirement.

Ease of Use and Ease of Management

- Support Web Management with Graphical User Interface (GUI) making management more flexible and easy to use.
- Support Network Time Protocol (NTP) that provide an accurate and consistent timestamp for traffic information analysis and fault diagnosis.
- Support Syslog that conduct network maintenance and management effectively.
- Support Telnet, SSH and SNMP (v1/v2/v3), making the management more easy, users could select any one of the method for switch remote monitoring and managing. Data flows of multiple ports can be monitored at the same time through one port. Users can monitor input frames, output frames or both, while improving the maintenance efficiency.
- Support CLI management interface that provide convenience for advanced users.
- Supports Link Layer Discovery Protocol (LLDP) technology that ease for network troubleshooting and operation.

Technical Parameters

Model	RG-S5750-24GT/8SFP-S	RG-S5750-48GT/4SFP-S
Basic Features		
Ports	24-Port 10/100/1000Base-T , 8 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0	48-Port 10/100/1000Base-T , 4 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0
Modules	1-port SFP+ 10G Transceiver 2-port SFP+ 10G Transceiver 2-port Gigabit SFP, 2 Combo 10/100/1000M Electrical Ports	
Switching Capacity	256Gbps	256Gbps
Forwarding Rate	96Mpps	132Mpps

Product Features	
VLAN	4K 802.1Q VLAN Super VLAN Port based VLAN Protocol VLAN Private VLAN Voice VLAN MAC Based VLAN Guest VLAN GVRP QinQ
QinQ	Supports transparent transmission of double-tagged packets Selects outer VLAN ID based on the port Selects outer VLAN ID based on the inner VLAN ID Selects outer VLAN ID based on traffic characteristics Determines an outer tag according to the priority of an inner tag For double-tagged packets, supports the change to outer VLAN ID information based on an outer VLAN ID For double-tagged packets, supports the change to outer VLAN ID information based on an inner VLAN ID
Link Aggregation	LACP(802.3ad)
Port Mirroring	<ul style="list-style-type: none"> Many-to-one mirroring Flow-based mirroring
Spanning Tree Protocol	STP, RSTP, MSTP
DHCP	<ul style="list-style-type: none"> DHCP/BOOTP Client DHCP Server DHCP Server Option 82 DHCP Relay DHCP Relay Option 82 DHCP Snooping DHCP Snooping Option 82 DHCP Snooping Trust DHCPv6 Server DHCPv6 Snooping
VSU	Support
IPv6	Support IPv6 addressing, Neighbor Discovery Protocol (NDP), ICMPv6, stateless automatic configuration, and Path MTU Discovery, ICMPv6, IPv6 Ping, IPv6 Tracert
IP Routing	Static routing, RIP, IPv6 Static routing, RIPng Equal-cost Multi-path (ECMP) Supports packet-based load balancing and flow-based load balancing
Multicast	SVGL IVGL IGMP filter, IGMP fast leave

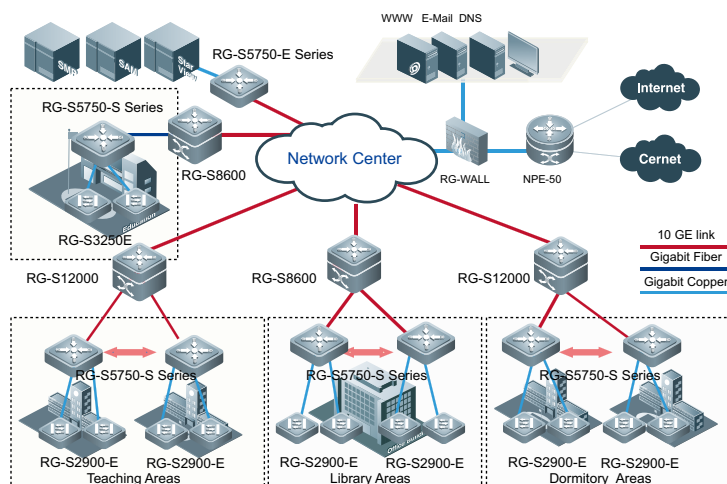
Model		RG-S5750-24GT/8SFP-S	RG-S5750-48GT/4SFP-S
IPv6 Tunnel		Manual tunnel, Auto tunnel ,ISATAP, 6-to-4 tunnel, GRE tunnel	
ACL& QoS	ACL	Supports various hardware ACLs <ul style="list-style-type: none"> • Standard IP ACL (hardware ACL based on IP addresses) • Extended IP ACL (hardware ACL based on the 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) • IPV6ACL • Egress ACL • ACL logging • ACL remark 	
	QoS	<ul style="list-style-type: none"> • traffic identification of ports • 802.1p/DSCP/TOS traffic classification • 8 queues with different priorities for each port • SP, WRR, DRR, SP+WRR, SP+DRR • Rate limiting • Congestion avoidance (Tail Drop) 	
Security		<ul style="list-style-type: none"> • Binding of IP, Mac and port • Binding IPv6, Mac and port • Security tunnel • Anti-gateway frauds • Limits the number of MAC addresses learned by a port • Filters illegal MAC addresses • ARP-Check • DAI • Support the prevention of setting a DHCP server without permission • Support hierarchical management by administrators and password protection • Support 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) • DoS protection • Restrict 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 	

Model	RG-S5750-24GT/8SFP-S	RG-S5750-48GT/4SFP-S
Management	SNMPv1/v2c/v3, CLI(Telnet/Console), RMON(1, 2, 4, 9), SSH, Syslog, NTP/SNTP, SNMP over IPv6, IPv6 MIB support for SNMP, SSHv6, Telnet v6, FTP/TFTP v6, DNS v6, NTP for v6, Traceroute v6, WEB management (GUI)	
High Reliability	<ul style="list-style-type: none">● G.8032● DLDP with static routing● DLDP with RIP● BFD with static routing● BFD with RIP● Graceful restart● VRRP● VRRP v3	
OAM	802.1AG	
Others	FTP, TFTP,DNS client, DNS static	
Physical Specifications		
Dimensions (D*W*H)(mm)	260 * 440 * 44mm	300 * 440 * 44mm
Power Supply	90VAC-264VAC, 50Hz-60Hz	
Power Consumption	43W (without modules) 60W (with modules)	72W (without modules) 90W (with modules)
Temperature	Operating temperature: 0℃-50℃	Storage temperature: -20℃-70℃
Humidity	Operating humidity: 10%-90%RH	Storage humidity: 5%-95%RH

Typical Applications

- Convergence layer or gigabit access layer, data center access layer.
- Network can be upgraded to a 10 Gigabit Ethernet uplink backbone by adding 10 Gigabit Ethernet modules so as to protect end-users investment.
 - Scenarios require flexible Gigabit port formation and quality; scenarios require high-performance of multilayer switching.
 - Support abundant security functions to strengthen network security.

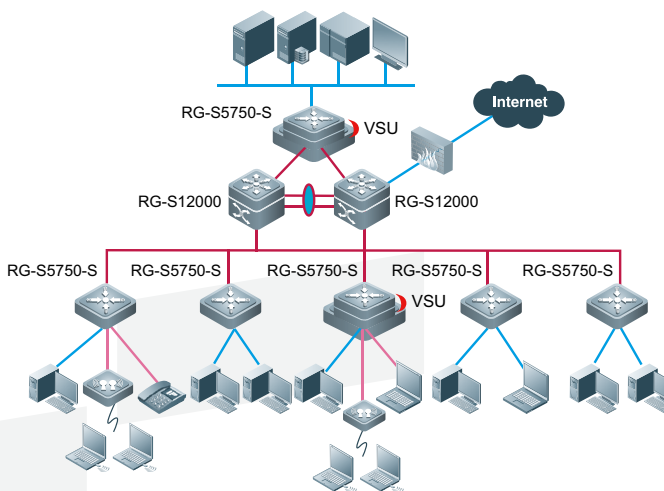
Typical Application 1: 10Gigabit Ethernet Backbone Campus Network



Gigabit Ethernet Uplink to Core Layer

■ RG-S5750-S is for campus network deployment with Gigabit Ethernet downlinks and 10 Gigabit Ethernet uplinks to meet the ever increasing number of network nodes and bandwidth requirements. Flexible virtualization with Gigabit Ethernet port or 10 Gigabit Ethernet port can build the VSU to realize convergence layer redundancy.

Typical Application 2: L3 Gigabit Ethernet Access Layer Switch for Large-scale Campus Network



Gigabit Ethernet Access Layer Switch

■ RG-S5750-S is linked to RG-S12000 series through 10 Gigabit Ethernet uplink and core layer are linked together through 10 GE/4 10GE. RG-S5750-S series can also provide Gigabit Ethernet access to desktop.

■ Supports flexible virtualization with Gigabit Ethernet port or 10 Gigabit Ethernet ports by using VSU.

Ordering Information

Product	Description
RG-S5750-24GT/8SFP-S	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-S	48-Port 10/100/1000Base-T, 4 GE SFP Combo Ports, 2 Extension Slots (Stack or Uplink), 1 USB 2.0
M5000E-02SFP/GT	M5000E Interface Module, 2-Port 10/100/1000Base-T, 2 GE SFP Combo Ports
M5000E-02XS	M5000E Interface Module, 2-Port 10GE (SFP+)
M5000E-01 XS	M5000E Interface Module, 1-Port 10GE (SFP+)
RPS150	Redundant Power System, for S5750S Series Switches
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-LH	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)
CAB-RPS-1.5M	Redundant Power Supply Cable, 1.5m



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