Ruijie RG-S2600-I FE Managed Access Switch Series Datasheet

Ruijie Networks Co., Ltd.

Revision Record

Revision Date	Version	Revised Sections	Details	Authors
2014-6-5	V1.0	Draft	- English translation completed	HK Translation Team
2016-3-8	V1.1	- All - Contact Us	- Updated banner - Standardized all formatting (specs table based on latest at-a-glance, ordering info table updated with optional accessories section)	HK Translation Team
2016-10-17	V1.2	-Technical Specifications -Contact us	- Revised “IP host entries” as “Routing table size” - Updated the contact us banner	HK Translation Team
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1 Product Pictures

RG-S2628G-I

RG-S2652G-I

2 Product Overview

RG-S2600G-I Series is intelligent security devices introduced by Ruijie Networks to construct secure and stable networks that including RG-S2628G-I and RG-S2652G-I. Based on the new generation hardware architecture, these switches fully combine the high performance, high security, multi-service, and easy availability required in network development and incorporate IPv6 features to provide users with brand new technical features and solutions.

Based on the actual network operation environment, the RG-S2600G-I Series switches adopt strict and flexible control over network users by supporting Web and 802.1x authentications at the same time. This effectively avoids illegal users from obtaining network resources and fully guarantees the entry of legal users. By determining attack packets, restricting their rates, and even isolating them, the RG-S2600G-I switches can easily handle attacks and keep themselves stable. In this manner, the stability of the entire network is ensured and applications can be continuously deployed on the network to deliver sustained values.

RG-S2600G-I series switch can provide complete end-to-end QoS for various types of network accesses, support flexible and diversified security policies and policy-based network management. They are the ideal access devices for applications on campus networks, administrative networks, and corporate networks and provide users with high-speed new access solutions in an efficient, secure and intelligent manner.

RG-S2600G-I series switches enable convenient network management and maintenance by offering flexible configuration modes including SNMP, Telnet, Web and Console, and provide flexible and perfect port combinations to facilitate users to select desired uplink interface modes based on cabling requirements.

3 Product Features

3.1 Flexible and Complete Security Control Policies

- Adopt several internal security mechanisms to effectively avoid and control virus spreading and network traffic attacks. In this manner, the switches can prevent illegal users from using the network and meanwhile, guarantee the rational utilization of networks by legal users. The mechanisms include the static and dynamic security binding of ports, port isolation, various hardware ACL controls, bandwidth rate restriction based on data streams, and binding multiple of information in user access control. In this manner, the switches meet the requirements of corporate and campus networks to strengthen the control on visitors and communication restriction of unauthorized users.

- Isolate the users' communication information from each other by setting ports to protected ports to ensure information security without occupying VLAN resources

- Effectively curb the ARP gateway spoofing and ARP host spoofing that become increasingly rampant on the network by adopting the dedicated hardware-based anti-ARP spoofing function and ensure normal network access

- Permit the DHCP response of only the trusted ports by leveraging the DHCP snooping feature to prevent unauthorized setup of the DHCP Servers from disturbing the IP address allocation and management and impacting normal network use. Furthermore, underpinned by the powerful DHCP snooping, the The RG-S2600G-I series switches can effectively prevent ARP host spoofing and source IP address spoofing in cases where DHCP provides dynamic IP address assignment by dynamically monitoring ARP and checking source IP addresses.

- Web and Telent access control based on the source IP address prevents illegal personnel and hackers from attacking and controlling devices to strengthen the security of devices.

- Encrypting management information in the process of Telnet and SNMP by using Secure Shell (SSH) and SNMPv3 ensures the security of management information and prevents hackers from launching attacks and controlling devices and protect the network against interference and sniffing.

- With multiple inherent security mechanisms including the static and dynamic port binding, port isolation, multiple types of hardware ACL (for example, expert-level ACL, time-based ACL), traffic-based bandwidth rate limiting, and multi-element binding of user secure access control, the RG-S2600G-I series switches prevent virus spreading and network traffic attacks and controls unauthorized network use.

3.2 High Reliability

- The Network Foundation Protection Policy (NFPP) classifies packets (management, forwarding, and protocol), restricts their rates, and monitors their attacks to support double protection of the CPU and channel bandwidth against attacks. In this manner, the switches can ensure the normal forwarding of packets and the normal status of protocols, keeping network stability.

- The spanning tree protocols 802.1D, 802.1w, and 802.1s support rapid convergence, enhance fault tolerance capability, and ensure the normal operation of networks and load balancing of links that properly utilize network channels and provide redundant links. The PortFast function greatly shortens thestandard convergence time of spanning tree protocols which ranges from 30 to 50 seconds. The BPDU guard function avoids loops in the spanning tree protocols.

3.3 Multi-Service Support

- With more and more services on the network, bandwidth guarantee becomes increasingly important. To avoid non-emergent services from occupying the bandwidth of emergent services, the RG-S2600G-I adopts complete QoS mechanisms to deploy multiple services.

- Support QoS policies of 802.1P, DSCP, IP TOS, and flow filtering at Layers 2 through 7 and provide traffic classification and flow control for MAC, IP, and application streams. The switches also support flow policies based on bandwidth control and forwarding priorities and allow networks to provide different qualities of services for different applications as required.

- Support IPv6-based QoS guarantee. The switches can identify different applications in the IPv6 environment and provide different qualities of services to ensure the bandwidth of key services.

- Each port supports the outgoing queues of eight priorities. This allows network administrators to allocate bandwidth to applications in a fine manner and better ensures the deployment of services. The switches support SP, WRR, and DRR mechanisms to determine the sequence to handle packets. For example, SP ensures the preferred transmission of services in a certain queue whereas WRR grants equal opportunity to the services in all queues.

- Support the flexible bandwidth control based on the combinations of switch ports, MAC addresses, IP addresses, VLAN IDs, protocols, and applications. The rate restriction granularity reaches 64 kbps. Based on network security requirements, you can set the bandwidth for different service applications as required.

3.4 Convenient and Easy Utilization and Management

- Adopt flexible Gigabit RJ-45 interfaces and Gigabit fiber port . You can choose connection methods based on the network architecture.
- Support the mixed stacking of devices. The stacking allows unified management and utilization of devices, decreases the management cost, and meanwhile, supports the flexible combination and extension of ports to seamlessly expand capacities. In this manner, the network is highly flexible and scalable and the network management becomes simpler.
- Support synchronous monitoring on several ports. You can use one port to monitor the data streams of several ports at the same time. You can also monionly the incoming frames, outgoing frames, or frames in both directions to enhance the maintenance efficiency.
- Support the network time protocol (NTP) and simple network time protocol (SNTP) to ensure the accuracy of time on the switches. The protocols also ensure the time consistency with servers on the network, facilitating the analysis and fault diagnosis of log and traffic information.
- The Syslog allows the unified collection, maintenance, analysis, fault location, and backup of various log information and makes easier for network administrators to maintain and manage networks.

3.5 Green Energy Conservation Design

- The S2628G-I, S2652G-I switches adopts the fan-free and noise-free design that largely reduces power consumption and noises.

4 Technical Specifications

Model	RG-S2628G-I	RG-S2652G-I
Ports	24 10/100BASE-T ports 2 1000BASE-T uplink ports 2 1G SFP ports (non-combo)	48 10/100BASE-T ports 2 1000BASE-T uplink ports 2 1G SFP ports (non-combo)
Fan Slots	Fanless	
Management Ports	1 console port	
Switching Capacity	64Gbps	
Packet Forwarding Rate	14.1Mpps	17.7Mpps
Port Buffer	1MB	2MB
ARP Table	130	
MAC Address	16K	
Routing Table Size (IPv4/IPv6)	32/16	
ACL Entries	500	1000
VLAN	4K 802.1Q VLAN, Port-based VLAN, Protocol Based VLAN, Private VLAN,Share VLAN, Voice VLAN, Guest VLAN, Q-in-Q, GVRP	
QinQ	Basic QinQ	
Link Aggregation	AP, LACP	
Port Mirroring	Many-to-one mirroring, Flow-based mirroring, Over Devices Mirroring, AP-port Mirroring, RSPAN	
Spanning Tree Protocols	IEEE802.1d STP, IEEE802.1w RSTP, standard 802.1s MSTP, Port Fast, BPDU Filter, BPDU Guard, TC Guard, TC Protection, ROOT Guard	
DHCP	DHCP Relay, DHCP Snooping. DHCP Client	
Multiple Spanning Tree (MST) Instances	64	
Maximum Aggregation Port (AP)	120	
VSU (Virtual Switch Unit)	Up to 8 stack members	
L2 Features	MAC, ARP, VLAN, Basic QinQ, Link Aggregation, Mirroring, STP, RSTP, MSTP, Broadcast storm control, MLD Snooping, DHCP, Jumbo Frame	
Layer 2 Protocols	IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3x, IEEE802.3ad, IEEE802.1p, IEEE802.1x, IEEE802.3ab, IEEE802.1Q, IEEE802.1d, IEEE802.1w, IEEE802.1s, IGMPSnooping v1/v2	
Layer 3 Features	IPv4 static routing, IPv6 static routing	
Layer 3 Protocols (IPv4)	Static routing	
IPv4 Features	IPv4 ACL, Ping, Traceroute	

IPv6 Features	ICMPv6, IPv6 Ping, IPv6 Tracert, Manually configure local address, Automatically create local address, Neighbor discovery, 0-64 any length mask	
Basic IPv6 Protocols	IPv6 host management related information	
IPv6 Routing Protocols	Static routing	
Multicast	IGMP snooping, IVGL mode, IGMP filter and IGMP fast leave;	
ACL	Standard IP ACL (IP-based hardware ACL) Extended IP ACL (Hardware ACL based on the IP address and TCP/UDP port number) MAC extended ACL (Hardware ACL based on the source/destination MAC address and optional Ethernet type, time-based ACL) Expert-level ACL (Hardware ACL based on the flexible combinations of VLAN number, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type and time)	
QoS	802.1p/DSCP/TOS traffic classification; Multiple queue scheduling mechanisms, such as SP, WRR, DRR, SP+WRR, SP+DRR; RED / WRED; Input / output port-based speed limit; Port-based traffic recognition; Each port supports 8 queue priorities	
IPv6 ACL	Support	
Reliability	VSU (virtualization technology for virtualizing multiple devices into 1), CPP, RLDP (Rapid Link Detection Protocol);	
Security	DHCP, ICMP, IP Source Guard, DOS Protection	
Manageability	SNMPv1/v2/v3, CLI (Telnet/Console), RMON (1, 2, 3, 9), SSH, Syslog, NTP/SNTP, Web	
Smart Temperature Control	Fan speed auto-adjustment; Fan malfunction alerts; Fan status check	
Smart Power Supply	Power management	
Other Protocols	FTP, TFTP, DNS client, DNS static	
Dimensions (W x D x H) (mm)	440 × 200 × 44	440 × 260 × 44
Rack Height	1RU	
Weight	3.9kg	4.2kg
MTBF	>200K hours	
Power Supply	AC input: Nominal voltage range: 100V to 240V AC Maximum voltage range: 90V to 264V AC Frequency: 50Hz to 60Hz Rated current: 0.5A HVDC input: Maximum voltage range: 192V to	AC input: Nominal voltage range: 100V to 240V AC Maximum voltage range: 90V to 264V AC Frequency: 50Hz to 60Hz Rated current: 0.6A HVDC input: Maximum voltage range: 192V to

	290V DC	290V DC Rated current: 0.2-0.12A
Power Consumption	17W	28W
Temperature	Operating temperature: 0°C to 50°C	
	Storage temperature: -20°C to 70°C	
Humidity	Operating humidity: 10% to 90%RH	
	Storage humidity: 5% to 95%RH	
Operating Altitude	-500M to 5,000M	

5 Ordering Information

Model	Description
RG-S2628G-I	RG-S2628G-I Ethernet Switch, 24-Port 10/100Base-T, 2-Port 1000base-T and 2 GE Ports SFP (Non-combo)
RG-S2652G-I	RG-S2652G-I Ethernet Switch, 48-Port 10/100Base-T, 2-Port 1000base-T and 2 GE Ports SFP (Non-combo)
Optional Accessories	
Mini-GBIC-SX-MM850	1000BASE-SX mini GBIC Transceiver (850nm)
Mini-GBIC-LX-SM1310	1000BASE-LX mini GBIC Transceiver (1310nm)
Mini-GBIC-GT	1000BASE-TX, SFP Transceiver (100m)
Mini-GBIC-LH40-SM1310	1000BASE-LH mini GBIC Transceiver (1310nm, 40km)
Mini-GBIC-ZX50-SM1550	1000BASE-ZX mini GBIC Transceiver (1550nm, 50km)
Mini-GBIC-ZX80-SM1550	1000BASE-ZX mini GBIC Transceiver (1550nm, 80km)
Mini-GBIC-ZX100-SM1550	1000BASE-ZX mini GBIC Transceiver (1550nm, 100km)

6 More Information

For more information about the Ruijie RG-S2600-I FE Managed Access Switch Series, please visit http://www.ruijienetworks.com or contact your local Ruijie sales representative.