



## **RP-GS8320I-8GC-S**

### **16-P SFP(100/1G) + 8-SFP/TP combo + 4-SFP(1G/2.5G) L2+ Managed Switch**



RP-GS8320I-8GC-S is a Layer 2+ full gigabit managed switch which supports 16-P SFP (100/1G) + 8-SFP/TP combo + 4-SFP (1G/2.5G), providing high-density performance and Layer 3 static routing with a 68Gbps switching capacity.

RP-GS8320I-8GC-S offers comprehensive end-to-end QoS, as well as flexible and rich management and security settings through SNMP, HTTP, and Telnet interfaces. It supports many L2 switch management functions, such as 802.1Q VLAN, 802.1x Security, Rate Control, Port Configuration, Port Mirroring, Port Statistics, and QoS functions. These features can meet the high-speed, secure, and smart requirements of enterprise networks at a cost-effective price.

The powerful network security features also enable RP-GS8320I-8GC-S to perform effective data traffic control for ISP and enterprise VoIP, video streaming, and multicast applications.

## **Features**

- Supports GE ports, 2.5GE port aggregation, static and dynamic aggregation
- Layer 3 features: IPv4/IPv6 static routing, DHCPv4/ DHCPv6 client, DHCPv4 relay, DHCP relay.
- Port features: Supports port aggregation, IEEE802.3x flow control, port isolation, port mirroring, loop detection and broadcast storm suppression
- VLAN: Supports IEEE802.1Q tagged VLAN, mac based VLAN, IP based VLAN, protocol based VLAN, voice VLAN and private VLAN.
- QinQ: Supports port-based, VLAN-based and flow-based Qin
- Supports GVRP/LLDP/SPAN/RSPAN/DHCPv4 snooping
- Layer 2 ring network protocol: Supports STP, RSTP, MSTP, G.8032 ERPS protocol, single ring, sub ring
- Multicast: IGMP snooping, IGMP v1, v2, v3, PIM-SM
- QoS: QoS class, remarking, Supports SP, WRR queue scheduling, Ingress/Egress port-based rate-limit and policy-based QoS
- Security: Supports ACL, 802.1x, port-security, IP source guard, ARP-check, DAI, anti-gateway ARP spoofing, Ddos attack protection, telnet/SSH/HTTP/HTTPS user access control and AAA.
- Reliability: Loop detect based on port or VLAN, the Ethernet in the first mile 802.3ah

- Management: Supports IPv4/IPv6 dual stack management, system log management, user management, login service management, firmware management, web management, CLI management, fault detection, DNS,NTP, sFlow, SNMP, MQTT, RMON and dual partition management.
- Application protocol: Supports telnet server, telnet client, SCP, SFTP, SSH server, TACACS and TFTP client

## Specifications

<b>Standards</b>	<ul style="list-style-type: none"> <li>● IEEE 802.3/3u 10Base-T, 100Base-TX Ethernet</li> <li>● IEEE 802.3ab 1000Base-T Ethernet</li> <li>● IEEE 802.3z 1000Base-X Ethernet</li> <li>● IEEE 802.3x Flow Control capability</li> <li>● IEEE 802.1D Spanning Tree Protocol</li> <li>● IEEE 802.1w Rapid Spanning Tree Protocol</li> <li>● IEEE 802.1Q VLAN</li> <li>● ITU-T G.8032 ERPS</li> <li>● IEEE 802.1X Port Authentication Network Control</li> <li>● IEEE 802.1ab LLDP</li> <li>● IEEE 802.3ad LACP</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>● 4 x 1G/2.5G SFP ports ,</li> <li>● 16 x 100/1000M SFP ports</li> <li>● 8 x 1G SFP/RJ45 COMBO ports ,</li> <li>● 1 x RJ45 console port</li> <li>● 1 x USB port for switch basic management and setup</li> </ul>
<b>Size of RAM</b>	● 512MB
<b>Size of Flash</b>	● 512MB
<b>Forwarding Capacity</b>	● 101.1Mpps
<b>Switching Capacity</b>	● 68Gbps
<b>Jumbo frames</b>	● 12M bit
<b>MAC Table</b>	● 16K MAC addresses
<b>Layer 2 function</b>	
<b>Port aggregation</b>	<ul style="list-style-type: none"> <li>● Support GE port aggregation</li> <li>● Support 2.5GE aggregation</li> <li>● Support static aggregation</li> <li>● Support LACP dynamic aggregation</li> <li>● Up to 64 aggregation groups and up to 8 ports per group</li> </ul>
<b>Port features</b>	<ul style="list-style-type: none"> <li>● Support IEEE802.3x flow control</li> <li>● Support interface counters</li> <li>● Support port isolation</li> <li>● Port mirroring (One-to-One, Many-to-One)</li> <li>● Support loop detection (Port-based;</li> </ul>

	<p>VLAN-based)</p> <ul style="list-style-type: none"> <li>• Support broadcast storm suppression (broadcast; unknown multicast; unknown unicast)</li> </ul>
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• IEEE802.1Q tagged VLAN</li> <li>• Mac based VLAN</li> <li>• IP based VLAN</li> <li>• Protocol based VLAN</li> <li>• Voice VLAN, specially divide VLAN for user voice data flow</li> <li>• Private VLAN, divide a VLAN broadcast domain into multiple subdomains to form a double-layer VLAN structure</li> <li>• VLAN range: 1-4094</li> <li>• Support access mode/trunk mode/hybrid mode</li> </ul>
<b>GVRP</b>	<ul style="list-style-type: none"> <li>• Normal mode</li> <li>• Fixed mode</li> <li>• Forbidden mode</li> </ul>
<b>QinQ</b>	<ul style="list-style-type: none"> <li>• Port-based QinQ</li> <li>• VLAN-based QinQ</li> <li>• VLAN mapping</li> <li>• Flow-based QinQ</li> </ul>
<b>LLDP</b>	<ul style="list-style-type: none"> <li>• Link Layer Discovery Protocol</li> <li>• Med</li> </ul>
<b>SPAN</b>	<ul style="list-style-type: none"> <li>• Number of Sessions: 7</li> <li>• Many-to-one</li> </ul>
<b>RSPAN</b>	<ul style="list-style-type: none"> <li>• Remote Switch Port Analyzer</li> </ul>
<b>MSTP</b>	<ul style="list-style-type: none"> <li>• 802.1D STP</li> <li>• 802.1W RSTP</li> <li>• 802.1S MSTP</li> <li>• BPDU Guard</li> <li>• Number of Single Ring Device Connections: 20</li> </ul>
<b>ERPS G.8032</b>	<ul style="list-style-type: none"> <li>• Major ring</li> <li>• Sub ring</li> <li>• Recovery time <math>\leq 20\text{ms}</math></li> <li>• Number of Single Ring Device Connections: No limit</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>• QoS Class, Remarking</li> <li>• Support SP, WRR Queue Scheduling</li> <li>• Ingress Port-based Rate-limit</li> <li>• Egress Port-based Rate-limit</li> <li>• Egress port-queue shaper</li> <li>• Policy-based QoS</li> <li>• Port Queue Numbers: 8</li> </ul>
<b>DHCPv4 Snooping</b>	<ul style="list-style-type: none"> <li>• DHCP snooping trust port</li> <li>• DHCP snooping option-82</li> </ul>

	<ul style="list-style-type: none"> <li>• DHCP snooping circuit-id and remote-id customized</li> </ul>
<b>L2 Multicast</b>	
<b>IGMP</b>	<ul style="list-style-type: none"> <li>• IGMP v1, v2, v3</li> </ul>
<b>IGMP Snooping</b>	<ul style="list-style-type: none"> <li>• Internet Group Management Protocol Snooping</li> <li>• Fast Leave</li> <li>• Multicast Table Size: 1K</li> </ul>
<b>PIM-SM</b>	<ul style="list-style-type: none"> <li>• Protocol Independent Multicast-Sparse Mode</li> </ul>
<b>Security features</b>	
<b>ACL</b>	<ul style="list-style-type: none"> <li>• IP Standard ACL</li> <li>• MAC extend ACL</li> <li>• IP extend ACL</li> <li>• IPv6 ACL</li> <li>• Time Range</li> <li>• ACL apply on VLAN</li> <li>• ACL entries, include input and output</li> </ul>
<b>802.1x</b>	<ul style="list-style-type: none"> <li>• Port access control</li> <li>• Mac-address access control</li> <li>• RADIUS server</li> </ul>
<b>Port-security</b>	<ul style="list-style-type: none"> <li>• Port-security</li> </ul>
<b>IP source guard</b>	<ul style="list-style-type: none"> <li>• IP Source Guard, Port-based IP/Mac Binding Access</li> </ul>
<b>ARP-check</b>	<ul style="list-style-type: none"> <li>• Support ARP-check and ARP packet filtering for illegal users</li> </ul>
<b>DAI</b>	<ul style="list-style-type: none"> <li>• Dynamic ARP Inspection</li> </ul>
<b>Anti-gateway ARP Spoofing</b>	<ul style="list-style-type: none"> <li>• Prevent Gateway ARP Spoofing</li> </ul>
<b>Ddos</b>	<ul style="list-style-type: none"> <li>• Ddos attack protection</li> </ul>
<b>Access control</b>	<ul style="list-style-type: none"> <li>• Support Telnet/SSH/HTTP/HTTPS user access control</li> </ul>
<b>AAA</b>	<ul style="list-style-type: none"> <li>• RADIUS authentication access switch</li> <li>• TACACS authentication access switch</li> <li>• Authorization</li> </ul>
<b>Reliability</b>	
<b>Loop Detect</b>	<ul style="list-style-type: none"> <li>• Loop detect, based on port or VLAN</li> </ul>
<b>EFM</b>	<ul style="list-style-type: none"> <li>• The Ethernet in the first mile, 802.3ah</li> </ul>
<b>Management &amp; maintenance functions</b>	
<b>Dual Stack</b>	<ul style="list-style-type: none"> <li>• IPv4 and IPv6 Dual Stack Management</li> </ul>
<b>System Log Management</b>	<ul style="list-style-type: none"> <li>• Syslog Level 7 to 0</li> <li>• Corresponding Debug/Info/Notice/Warning/ Err/ Critical/ Alert</li> <li>• Support connecting up to 3 Servers</li> <li>• For IPv4 and IPv6</li> </ul>
<b>User Management</b>	<ul style="list-style-type: none"> <li>• Support password protection, support MD5/SHA256/SHA512 algorithm</li> <li>• Local Management of User Privilege</li> <li>• Remote authorization by RADIUS or TACACS</li> </ul>

	<ul style="list-style-type: none"> <li>• Enable privilege protection</li> <li>• User password complexity requirements</li> <li>• User login fail protection</li> <li>• User Privilege Level 0 to 15</li> </ul>
<b>Login Service Management</b>	<ul style="list-style-type: none"> <li>• Up to 8 users online simultaneously</li> <li>• Access control based on IPv4 or IPv6 ACL</li> </ul>
<b>Firmware Management</b>	<ul style="list-style-type: none"> <li>• Firmware upgraded by WEB</li> <li>• Firmware upgraded by CLI</li> <li>• Dual partition</li> </ul>
<b>Web Management</b>	<ul style="list-style-type: none"> <li>• Web Management</li> <li>• Support HTTP V1.1</li> <li>• Support HTTPS</li> <li>• For IPv4 and IPv6</li> </ul>
<b>CLI management</b>	<ul style="list-style-type: none"> <li>• Console/Telnet command line management</li> </ul>
<b>Fault Detection</b>	<ul style="list-style-type: none"> <li>• Ping/Traceroute, For IPv4 and IPv6</li> <li>• Optical transceiver DDM</li> <li>• One click fault information collection</li> <li>• Cable detection</li> </ul>
<b>DNS</b>	<ul style="list-style-type: none"> <li>• Domain Name System</li> </ul>
<b>NTP</b>	<ul style="list-style-type: none"> <li>• Network Time Protocol, For IPv4 and IPv6</li> <li>• Support domain name configuration</li> </ul>
<b>Configuration Import /Export</b>	<ul style="list-style-type: none"> <li>• Network Time Protocol, For IPv4 and IPv6</li> </ul>
<b>sFlow</b>	<ul style="list-style-type: none"> <li>• Support domain name configuration</li> </ul>
<b>SNMP</b>	<ul style="list-style-type: none"> <li>• Network Time Protocol, For IPv4 and IPv6</li> </ul>
<b>MQTT</b>	<ul style="list-style-type: none"> <li>• Support domain name configuration</li> </ul>
<b>RMON</b>	<ul style="list-style-type: none"> <li>• Network Time Protocol, For IPv4 and IPv6</li> </ul>
<b>Dual partition management</b>	<ul style="list-style-type: none"> <li>• Support domain name configuration</li> </ul>
<b>Application Protocol Functions</b>	
<b>Telnet server</b>	<ul style="list-style-type: none"> <li>• Support telnet server for IPv4 and IPv6</li> </ul>
<b>Telnet client</b>	<ul style="list-style-type: none"> <li>• Support telnet client for IPv4 and IPv6</li> </ul>
<b>SCP (Secure Copy Protocol)</b>	<ul style="list-style-type: none"> <li>• SCP client/server for IPv4 and IPv6</li> </ul>
<b>SFTP</b>	<ul style="list-style-type: none"> <li>• sftp client/server for IPv4 and IPv6</li> </ul>
<b>SSH server</b>	<ul style="list-style-type: none"> <li>• Support login based on user password-SSH2, support IPv4, IPv6</li> <li>• Support public key-based login</li> </ul>
<b>TACACS</b>	<ul style="list-style-type: none"> <li>• Support TACACS (the terminal access controller accesses the control system)</li> </ul>
<b>TFTP</b>	<ul style="list-style-type: none"> <li>• Support TFTP Client</li> </ul>
<b>Layer 3 features</b>	
<b>Static Route</b>	<ul style="list-style-type: none"> <li>• Support VLAN interface and route port</li> <li>• IPv4 static routing table entry configuration</li> <li>• ARP dynamic learning and static configuration</li> <li>• IPv6 static routing table entry configuration</li> <li>• Neighbor discovery and static configuration</li> <li>• Routing prefix table size 4k for IPv4, for IPv6 divide by 4</li> </ul>

<b>DHCPv4 Client</b>	<ul style="list-style-type: none"> <li>• Dynamic host configuration protocol for IPv4</li> </ul>
<b>DHCPv6 Client</b>	<ul style="list-style-type: none"> <li>• Dynamic host configuration protocol for IPv6</li> </ul>
<b>DHCPv4 Relay</b>	<ul style="list-style-type: none"> <li>• DHCP Relay for IPv4</li> </ul>
<b>DHCPv4 Server</b>	<ul style="list-style-type: none"> <li>• DHCP Server for IPv4</li> </ul>
<b>Mechanical structure</b>	
<b>Power surge protection</b>	<ul style="list-style-type: none"> <li>• 4KV</li> </ul>
<b>Ethernet ports surge protection</b>	<ul style="list-style-type: none"> <li>• 4KV</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• ≤36W</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• Internal Power supply 100~240VAC, 50/60 Hz</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Operating temperature: 0°C to 50°C</li> <li>• Operating Humidity: 10 to 90% (Non-Condensing)</li> </ul>
<b>Dimension</b>	<ul style="list-style-type: none"> <li>• 440*245*44mm (WxDxH)</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>• CE, FCC</li> </ul>

## Ordering information

**RP-GS8320I-8GC-S** 16-P SFP(100/1G) + 8-SFP/TP combo + 4-SFP(1G/2.5G) L2+ Managed Switch