

RP-GS8520IX-8GC-S

16-P SFP(100/1G) + 8-SFP/TP combo + 4-SFP+(1G/2.5G/10G) L3 Managed Full Fiber Switch



RP-GS8520IX-8GC-S is a high-density Layer 3 Managed Gigabit Switch designed for enterprise, industrial, and demanding network applications. It supports Layer 3 static and dynamic routing, including RIP and OSPF, enabling efficient network segmentation, flexible routing, and reliable data communication across different network environments.

Equipped with 16 × 100/1G SFP ports, 8 × 100/1G SFP/TP combo ports, and 4 × 1G/2.5G/10G SFP+ ports, the switch provides up to 128 Gbps switching capacity and flexible high-speed uplink connectivity. It is ideal for network aggregation, backbone, and high-bandwidth access applications.

Comprehensive Layer 2 and Layer 3 management features, including VLAN, QoS, multicast, link aggregation, and network security, provide efficient traffic control and reliable network operation. The RP-GS8520IX-8GC-S is suitable for enterprise networks, IP surveillance, VoIP, video streaming, and other bandwidth-intensive applications.

Features

- Layer 3 Routing: IPv4/IPv6 Static Routing, RIP, OSPF, BGP4, IS-IS, VRRP, ECMP; up to 13K Routing Entries
- Port Management: Link Aggregation, Flow Control, Port Isolation, Port Mirroring, Loop Detection, Broadcast Storm Suppression
- VLAN: IEEE 802.1Q, MAC/IP/Protocol-based VLAN, Voice VLAN, Private VLAN
- QinQ: Port-based, VLAN-based and Flow-based QinQ
- Layer 2 Ring: STP, RSTP, MSTP, G.8032 ERPS; Single Ring and Sub-Ring
- Multicast: IGMP Snooping, IGMP v1/v2/v3, PIM-SM
- QoS: Traffic Classification, Priority Remarking, SP/WRR Scheduling, Ingress/Egress Rate Limiting, Policy-based QoS
- Network Security: ACL, IEEE 802.1X, Port Security, IP Source Guard, ARP Inspection, DAI, Anti-ARP Spoofing, DDoS Protection
- Network Protocols: GVRP, LLDP, SPAN/RSPAN, DHCP Snooping, IEEE 802.3ah
- Management: IPv4/IPv6 Dual Stack, Web GUI, CLI, SNMP, RMON, sFlow, MQTT, System

Log, NTP, DNS

- System Management: User & Access Control, Firmware Upgrade, Fault Detection, Dual Image/Partition Management
- Secure Access: SSH, HTTPS, Telnet, AAA, TACACS, SCP, SFTP, TFTP

Specifications

Standards	• IEEE 802.3/3u 10Base-T, 100Base-TX Ethernet • IEEE 802.3ab 1000Base-T Ethernet • IEEE 802.3z 1000Base-X Ethernet • IEEE 802.3ae 10Gigabit Ethernet • IEEE 802.3x Flow Control capability • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1w Rapid Spanning Tree Protocol • IEEE 802.1Q VLAN • ITU-T G.8032 ERPS • IEEE 802.1X Port Authentication Network Control • IEEE 802.1ab LLDP • IEEE 802.3ad LACP
Interface	• 16 x 100/1000M SFP ports • 4 x 1G/2.5G/10G SFP+ ports , • 8 x 1G SFP/RJ45 COMBO ports
Management port	• 1 x RJ45 Console port (115200,8,N,1) • 1 x USB 2.0 port for switch basic management and setup
Size of RAM	• 1GB
Size of Flash	• 512MB
Switching features	
Switching capacity	• 128Gbps
Packet forwarding rate	• 190.4Mpps
MAC address table	• 16K
VLAN	• 4K
Buffer	• 12Mbit
Forwarding delay	• <5us
Jumbo Frame	• Support 10Kbytes
MDI/MDIX	• Support
Watchdog	• Support
Layer 2 switching	
Port aggregation	• Support GE port aggregation • Support 2.5GE aggregation • Support 10GE aggregation • Support static aggregation • Support LACP dynamic aggregation • Up to 64 aggregation groups and up to 8 ports per group
Port features	• Support IEEE802.3x flow control

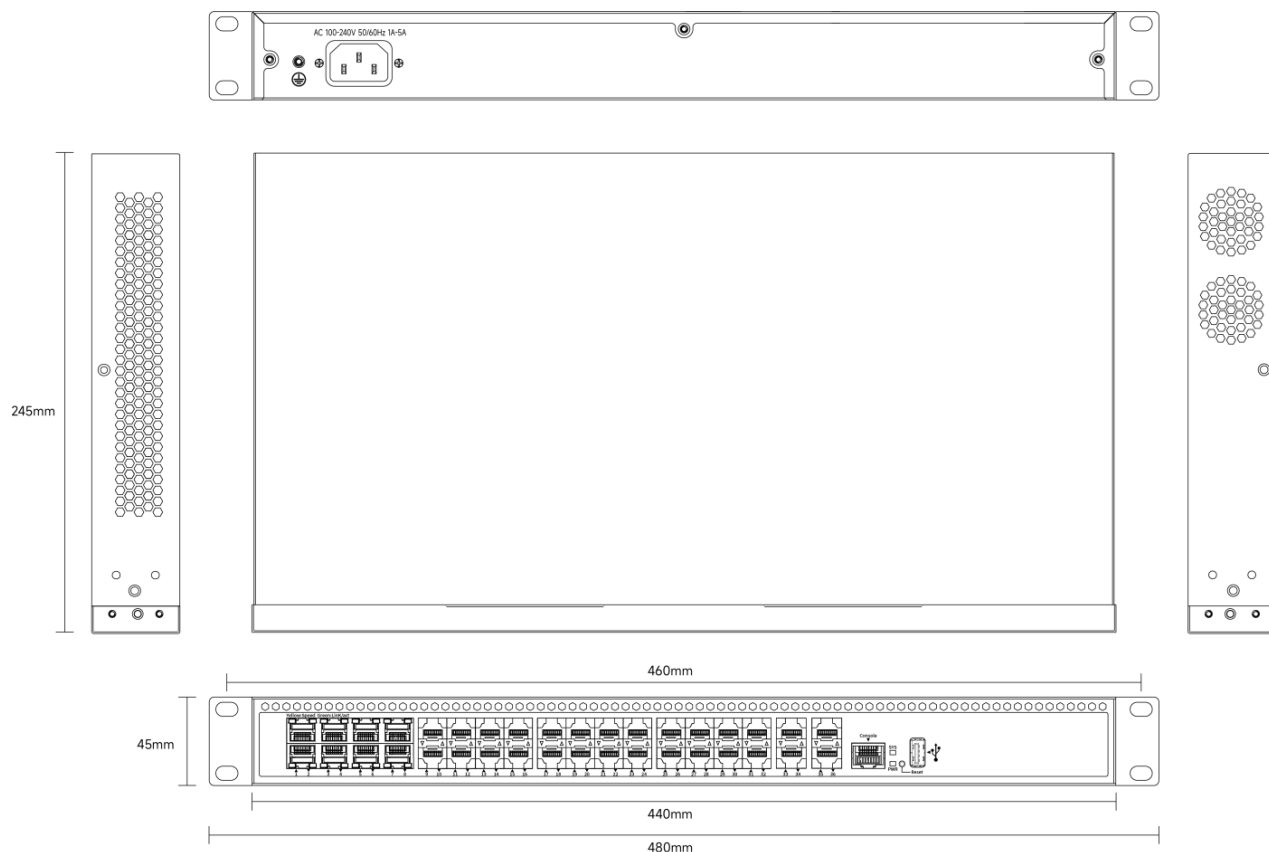
	• Support interface counters • Support port isolation • Port mirroring (One-to-One, Many-to-One) • Support loop detection (Port-based; VLAN-based) • Support broadcast storm suppression (broadcast; unknown multicast; unknown unicast)		
VLAN	• IEEE802.1Q tagged VLAN • Mac based VLAN • IP based VLAN • Protocol based VLAN • Voice VLAN, specially divide VLAN for user voice data flow • Private VLAN, divide a VLAN broadcast domain into multiple subdomains to form a double-layer VLAN structure • VLAN range: 1-4094 • Support access mode/trunk mode/hybrid mode		
Mac-address management	<table> <tr> <td></td><td> • Support static Mac-address management • Support dynamic Mac-address Management • Support filtering Mac-address • Support MAC limit based on port and VLAN • Support MAC flapping based on port and VLAN • 16K Mac-address table size </td></tr> </table>		• Support static Mac-address management • Support dynamic Mac-address Management • Support filtering Mac-address • Support MAC limit based on port and VLAN • Support MAC flapping based on port and VLAN • 16K Mac-address table size
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GVRP	• Normal mode • Fixed mode • Forbidden mode		
QinQ	• Port-based QinQ • VLAN-based QinQ • VLAN mapping • Flow-based QinQ		
LLDP	• Link Layer Discovery Protocol • Med		
SPAN	• Number of Sessions: 7 • Many-to-one		
RSPAN	• Remote Switch Port Analyzer		
MSTP	• 802.1D STP • 802.1W RSTP • 802.1S MSTP • BPDU Guard • Number of Single Ring Device Connections: 20		
ERPS G.8032	• Major ring • Sub ring • Recovery time $\leq 20\text{ms}$ • Number of Single Ring Device Connections: No limit		
QoS	• QoS Class, Remarking • Support SP, WRR Queue Scheduling		

	• Ingress Port-based Rate-limit • Egress Port-based Rate-limit • Egress port-queue shaper • Policy-based QoS • Port Queue Numbers: 8
DHCPv4 Snooping	• DHCP snooping trust port • DHCP snooping option-82 • DHCP snooping circuit-id and remote-id customized
L2 Multicast	
IGMP	• IGMP v1, v2, v3
IGMP Snooping	• Internet Group Management Protocol Snooping • Fast Leave • Multicast Table Size: 1K
PIM-SM	• Protocol Independent Multicast-Sparse Mode
Security features	
ACL	• IP Standard ACL • MAC extend ACL • IP extend ACL • IPv6 ACL • Time Range • ACL apply on VLAN • ACL entries, include input and output
802.1x	• Port access control • Mac-address access control • RADIUS server
Port-security	• Port-security
IP source guard	• IP Source Guard, Port-based IP/Mac Binding Access
ARP-check	• Support ARP-check and ARP packet filtering for illegal users
DAI	• Dynamic ARP Inspection
Anti-gateway ARP Spoofing	• Prevent Gateway ARP Spoofing
Ddos	• Ddos attack protection
Access control	• Support Telnet/SSH/HTTP/HTTPS user access control
AAA	• RADIUS authentication access switch • TACACS authentication access switch • Authorization
Reliability	
Loop Detect	• Loop detect, based on port or VLAN
EFM	• The Ethernet in the first mile, 802.3ah
Management & maintenance functions	
Dual Stack	• IPv4 and IPv6 Dual Stack Management
System Log Management	• Syslog Level 7 to 0 • Corresponding Debug/Info/Notice/Warning/ Err/ Critical/ Alert • Support connecting up to 3 Servers • For IPv4 and IPv6

User Management	• Support password protection, support MD5/SHA256/SHA512 algorithm • Local Management of User Privilege • Remote authorization by RADIUS or TACACS • Enable privilege protection • User password complexity requirements • User login fail protection • User Privilege Level 0 to 15
Login Service Management	• Up to 8 users online simultaneously • Access control based on IPv4 or IPv6 ACL
Firmware Management	• Firmware upgraded by WEB • Firmware upgraded by CLI • Dual partition
Web Management	• Web Management • Support HTTP V1.1 • Support HTTPS • For IPv4 and IPv6
CLI management	• Console/Telnet command line management
Fault Detection	• Ping/Traceroute, For IPv4 and IPv6 • Dying gasp optional • Optical transceiver DDM • One click fault information collection • Cable detection
DNS	• Domain Name System
NTP	• Network Time Protocol, For IPv4 and IPv6 • Support domain name configuration
Configuration Import /Export	• FTP/TFTP based remote configuration import and export
sFlow	• Sampled flow
SNMP	• Version SNMPV2C/V3
MQTT	• Message Queuing Telemetry Transport
RMON	• Support RMON (Remote Monitoring) alarm
Dual partition management	• Support dual partition switching
Application Protocol Functions	
Telnet server	• Support telnet server for IPv4 and IPv6
Telnet client	• Support telnet client for IPv4 and IPv6
SCP (Secure Copy Protocol)	• SCP client/server for IPv4 and IPv6
SFTP	• sftp client/server for IPv4 and IPv6
SSH server	• Support login based on user password-SSH2, support IPv4, IPv6 • Support public key-based login
TACACS	• Support TACACS (the terminal access controller accesses the control system)
TFTP	• Support TFTP Client
Layer 3 features	
Static Route	• Support VLAN interface and route port • IPv4 static routing table entry configuration

	• ARP dynamic learning and static configuration • IPv6 static routing table entry configuration • Neighbor discovery and static configuration • Routing prefix table size 4k for IPv4, for IPv6 divide by 4
DHCPv4 Client	• Dynamic host configuration protocol for IPv4
DHCPv6 Client	• Dynamic host configuration protocol for IPv6
DHCPv4 Relay	• DHCP Relay for IPv4
DHCPv4 Server	• DHCP Server for IPv4
ECMP	• Support ECMP (Equal-cost multi-path routing) • Support the configuration of ECMP Max next-hop • Support capacity balanced configuration
Route policy	• IPv4 prefix-list
VRRP	• Virtual Router Redundancy Protocol
Routing Protocol Specification	
RIP	• RIPv1/v2
OSPFv2	• OSPFv2
BGP4	• BGP4 • BGP Support Routing Recursive ECMP • Support to view the number of neighbors and up/down state
IS-IS	• IS-ISv4
Routing entries	• 13K
Mechanical structure	
LED Indicators	• PWR (Power indicator) • SYS (System status indicator) • 1-8 (Copper ports indicators) Green • 1-8 (Copper speed indicators) Yellow • 1-8(Fiber ports indicators) Green • 9-28(Fiber ports indicators) Green
Power Consumption	• ≤36W
Power Supply	• Internal Power supply 100~240VAC, 50/60 Hz
Over-current protection	• Support
Environment	• Operating temperature: 0°C to 50°C • Storage temperature: -10°C~ +70°C • Operation humidity: 10%-90%RH (Non-Condensing) • Storage humidity: 5%-95%RH
Dimension	• 440*245*44mm (WxDxH)
Protection	• Surge protection of power: 4KV • Surge protection of Ethernet ports: 4KV • ESD: Contact 6kV, Air 8kV
Certification	• CE, FCC

Diagram



Ordering information

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Managed Full Fiber Switch

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