

RP-GS8548IX-S

48-P SFP(100/1G) + 4-SFP+(1G/2.5G/10G) L3 Managed Full Fiber Switch



RP-GS8548IX-S is a high-density Layer 3 Managed Full Fiber 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 fiber-based network environments.

Equipped with 48 × 100/1G SFP ports and 4 × 1G/2.5G/10G SFP+ ports, the switch provides up to 336 Gbps switching capacity with flexible high-speed uplink connectivity. Its full-fiber design makes it ideal for network aggregation, backbone, and high-bandwidth access applications requiring long-distance and reliable fiber connectivity.

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-GS8548IX-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	• 48 x 100/1000M SFP ports • 4 x 1G/2.5G/10G SFP+ 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	• 336Gbps
Packet forwarding rate	• 499.9Mpps
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

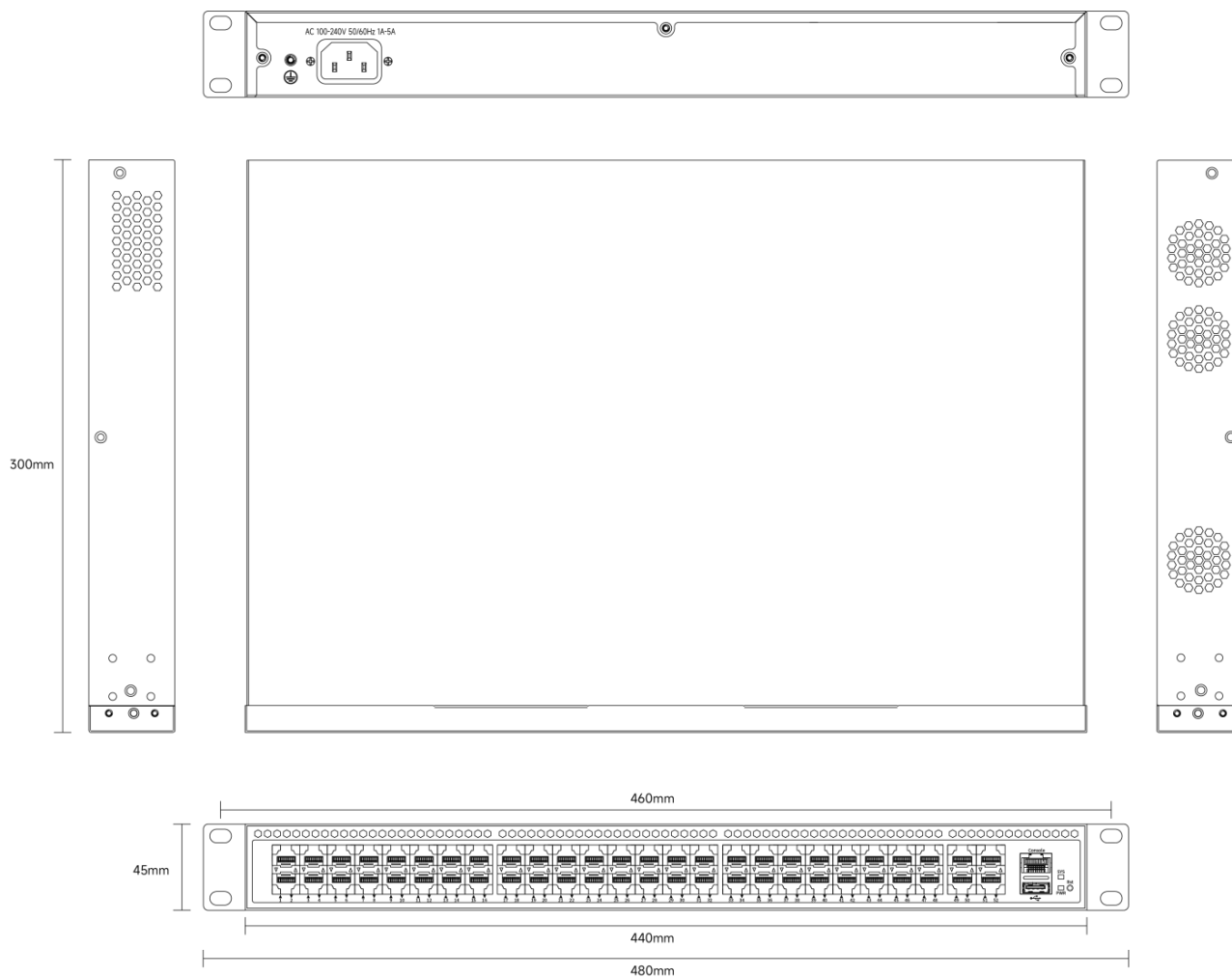
Port features	• Support IEEE802.3x flow control • Support interface counters • Support port isolation • Port mirroring (One-to-One, Many-to-One) • Support loop detection (Port-based; VLAN-based) • Support broadcast storm suppression (broadcast; unknown multicast; unknown unicast)
VLAN	• IEEE802.1Q tagged 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 table management	• 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
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 ≤20ms • 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 - 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) 1-52(Fiber ports indicators) Green
Power Consumption	≤56W
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*300*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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