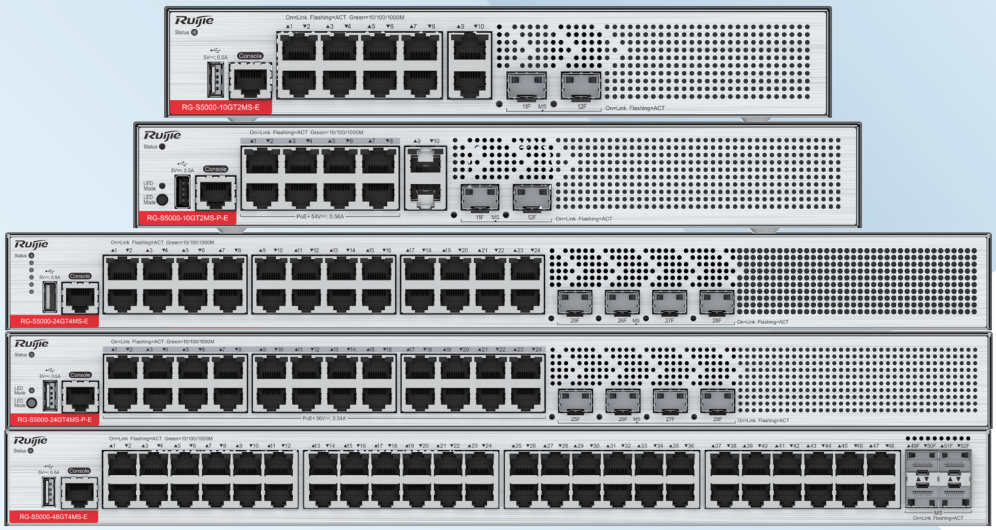
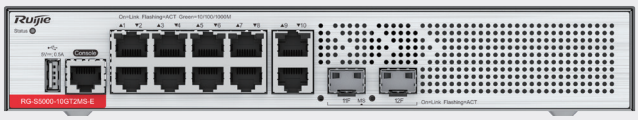


RG-S5000-E Series

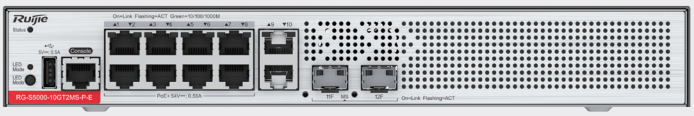
Simplified Gigabit Switch

Scan QR Code
For More Enquiry

Product Pictures

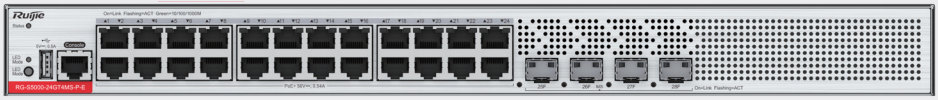


RG-S5000-10GT2MS-E



RG-S5000-10GT2MS-P-E

RG-S5000-24GT4MS-E



RG-S5000-24GT4MS-P-E

RG-S5000-48GT4MS-E

Product Overview

RG-S5000-E series switches are next-generation cost-effective L2+ access switches released by Ruijie Networks for university, hospital, and enterprise campus scenarios. The series include PoE and non-PoE models and can meet requirements in wired network, wireless network, and other scenarios.

Product Highlights

- L2+ access switch, supporting static route and Routing Information Protocol (RIP)
- 2.5G uplink ports, providing high bandwidth and better handling data bursts
- Port surge protection capability of up to 10 kV, reducing the probability of port damage caused by surges and improving network stability
- Rapid Link Detection Protocol (RLDP), which can quickly detect link connectivity and unidirectional communication over optical links, and can detect loops on interfaces to prevent network failures caused by loops when switch interfaces are connected to unauthorized devices such as hubs
- Energy Efficient Ethernet (EEE): When a port is idle for a given period of time, the system sets the port to energy-saving mode and wakes it up to transmit services by sending listening packets.
- SNMP, Syslog, and other features used for routine network diagnosis and maintenance, enabling easy O&M, simplified network management, and plug-and-play

Product Features

Strong Surge Protection Capability

The RG-S5000-E provides 10 kV surge protection for ports. The strong surge protection capability reduces the probability of ports damaged by surge and improves customers' network stability.

Uplink 2.5GE Ports

On the network of a video surveillance system, a large amount of continuous video data needs to be transmitted and mass burst data is generated instantaneously. To deal with the data, switches need to have stable data forwarding and bandwidth redundancy capability. More cameras connected to a switch indicate that a greater amount of data flows through the switch. If the amount of camera data forwarded by a switch exceeds the forwarding capability of an uplink port on the switch, packet loss occurs on the port and video freezing occurs. The uplink ports of the RG-S5000-E can work at a rate of 2.5 Gbps. Compared with the 1 Gbps uplink rate, the RG-S5000-E can connect to more terminals in HD monitoring scenarios and better cope with burst data.

High Reliability

The RG-S5000-E supports the Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), achieving fast convergence, improving the fault tolerance capability, and ensuring stable network operation and link load balancing. It effectively uses network channels to improve the utilization of aggregate links.

The Rapid Link Detection Protocol (RLDP) enables the RG-S5000-E to quickly detect link connectivity and unidirectional optical links. The port loop detection function helps the RG-S5000-E to prevent network failures caused by loops due to unauthorized port connections with hubs.

The RG-S5000-E supports the Ethernet Ring Protection Switching (ERPS) technology, which is a Layer 2 link redundancy protocol designed for the core Ethernet. The control device blocks loops and restores links, and non-control devices directly report their link status to the control device, without processing from other non-control devices. Therefore, loop elimination and service recovery time of ERPS is faster than that of STP. ERPS implements link restoration within milliseconds.

The RG-S5000-E provides an advanced hardware CPU protection mechanism: CPU protect policy (CPP). It classifies data traffic sent to the CPU, processes the traffic by queue priority, and rate-limits the bandwidth as required. This protection mechanism also fully protects the CPU from being occupied by unauthorized traffic, defends against malicious attacks, and prevents resource consumption, thereby ensuring

the security of the CPU and switch itself.

The RG-S5000-E adopts the Network Foundation Protection Policy (NFPP) technology to rate-limit ARP packets, ICMP request packets, DHCP Request messages, and other packets sent from users to networks. It discards packets of which the rate exceeds the threshold, identifies attack behaviors, and isolates users who launch attacks. This ensures network stability.

Fanless Design and Energy Saving

Ruijie integrates multiple energy-saving design ideas into the RG-S5000-E series switches, preventing loud noise and saving energy.

The RG-S5000-E provides Energy Efficient Ethernet (EEE). When a port is always idle in a given period of time, the system enables the port to enter the energy saving mode. When the port needs to receive or send a packet, the system resumes services on the port by periodically sending listening streams, saving energy.

Some models of RG-S5000-E series switches adopt the fanless design, which ensures no noise and no forced airflow, preventing dust and chemical pollutants in the air from entering the switch and causing corrosion and static electricity accumulation.

The RG-S5000-E supports intelligent fan speed regulating. It monitors the temperature in real time, reduces the fan speed, prolongs the fan service life, and reduces noise pollution.

The RG-S5000-E is tested in accordance with GB/T 18313-2001 and the noise meets the standard of sleeping in the living room at night.

Ease of Network Maintenance

When a fault occurs on software, the RG-S5000-E automatically restarts all processes for recovery.

It is equipped with standard USB ports and can be upgraded using the USB flash drive.

A network administrator can install network cables into the RG-S5000-E to manage and configure it in web mode without extra configuration.

It supports remote management, configuration backup and restoration, remote fault diagnosis, and historical log analysis.

It supports cloud management and delivers simplified O&M management and user experience:

Ease of networking: Only a PC or mobile phone available for Internet access is required to complete device deployment. The RG-S5000-E supports plug and play.

Ease of O&M: Network O&M is simple. You can manage the network anytime and anywhere.

Ease of monitoring: You can view the network health and device details including the system status, traffic trend, connectivity, and power supply status) at any time. Faults and user network experience are visible, alarms are pushed once they are generated, and logs are generated to facilitate event traceback.

Ease of authentication: Based on Ruijie Cloud, it provides authentication for Internet access, without any additional software and servers.

Intelligent O&M

The RG-S5000-E supports plug and play during network deployment and O&M, allowing users to conduct O&M independently without professional after-sale intervention. It also supports loop detection and zero touch replacement to improve O&M efficiency.

Cloud Management

The RG-S5000-E can be added or imported to WIS in batches. WIS can remotely manage the RG-S5000-E, including online status monitoring, configuration delivery, upgrade, restart, configuration backup, and restoration.

Product Specifications

Hardware Specifications

Interface Specifications

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Fixed port	10 x 10/100/1000Base-T Ethernet ports with auto-negotiation 2 x 2.5GE/1GE SFP ports	10 x 10/100/1000Base-T Ethernet ports with auto-negotiation 2 x 2.5GE/1GE SFP ports PoE/PoE+ supported	24 x 10/100/1000Base-T Ethernet ports with auto-negotiation 4 x 2.5G/1GE SFP ports	24 x 10/100/1000Base-T Ethernet ports with auto-negotiation 4 x 2.5GE/1GE SFP ports PoE/PoE+ supported	48 x 10/100/1000Base-T Ethernet ports with auto-negotiation 4 x 2.5GE/1GE SFP ports
Power module	1 x fixed module				
Fan module	0	1 x fixed module	0	2 x fixed modules	2 x fixed modules
Fixed management port	1 x RJ45 console port and 1 x USB port				

System Specifications

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Packet forwarding rate	22.5 Mpps	22.5 Mpps	51 Mpps	51 Mpps	87 Mpps
System switching capacity	30 Gbps	30 Gbps	68 Gbps	68 Gbps	116 Gbps
MAC address	16000				
ARP table size	512				
ND table size	256				
Number of IPv4 unicast routes	64				
Number of IPv6 unicast routes	64				
Number of ACEs	500				

Dimensions and Weight

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Dimensions (W x D x H)	260 mm x 170 mm x 43.6 mm (10.24 in. x 6.69 in. x 1.72 in.), 1 RU	297 mm x 170 mm x 43.6 mm (11.69 in. x 6.69 in. x 1.72 in.), 1 RU	440 mm x 220 mm x 43.6 mm (17.32 in. x 8.66 in. x 1.72 in.), 1 RU	440 mm x 220 mm x 43.6 mm (17.32 in. x 8.66 in. x 1.72 in.), 1 RU	440 mm x 220 mm x 43.6 mm (17.32 in. x 8.66 in. x 1.72 in.), 1 RU
Weight (full load)	2 kg (4.41 lbs)	2.5 kg (5.51 lbs)	2.5 kg (5.51 lbs)	2.8 kg (6.17 lbs)	2.8 kg (6.17 lbs)

CPU and Storage

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
CPU	ARM Cortex A9, 1.2 GHz				
Storage	512 MB SDRAM 64 MB flash memory				
Data packet buffer	512 KB	512 KB	512 KB	512 KB	512 KB

Power and Consumption

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Maximum power consumption	16 W	141 W (PoE power: 125 W)	15.6 W	430 W (PoE power: 370 W)	30 W
Rated input voltage	100 V AC to 240 V AC @50 Hz/60 Hz				
Maximum input voltage	90 V AC to 264 V AC @50 Hz/60 Hz				

Environment and Reliability

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
MTBF	> 200K	> 200K	> 200K	> 200K	> 200K
Primary airflow	Natural heat dissipation	Forced air cooling	Natural heat dissipation	Forced air cooling	Forced air cooling
Operating temperature	0°C to 45°C (32°F to 113°F)				
Storage temperature	–40°C to +70°C (–40°F to +158°F)				
Operating humidity	10% to 90% RH (non-condensing)				

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Storage humidity	5% to 95% RH (non-condensing)				
Operating altitude	–500 m to +5,000 m (–1640.42 ft. to + 16404.20 ft.) Above an altitude of 1800 m (5905.51 ft.), the operating temperature can decrease.				
Operating noise	Fanless	≤40 dB	Fanless	≤40 dB	≤40 dB
Interface surge protection	Common mode 10 kV	Common mode 10 kV	Common mode 10 kV	Common mode 10 kV	Common mode 10 kV

Others

Model	RG-S5000-10GT2MS-E	RG-S5000-10GT2MS-P-E	RG-S5000-24GT4MS-E	RG-S5000-24GT4MS-P-E	RG-S5000-48GT4MS-E
Installation mode	Mounting on a workbench/wall or in a rack (cabinet)				

Software Specifications

RG-S5000-E Series	
Feature	Description
Ethernet switching	Jumbo frame (maximum length: 9216 bytes)
	802.3az EEE
	IEEE 802.1Q (4K VLANs)
	Voice VLAN
	Port-based VLAN assignment
	Basic QinQ and selective QinQ
	STP (IEEE 802.1.d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	ERPS (G.8032)
	LLDP/LLDP-MED
IP service	Static and dynamic ARP
	DHCP client

RG-S5000-E Series	
Feature	Description
IP service	DHCP relay
	DHCP server
	DHCP snooping
	DNS client
	Neighbor Discovery (ND)
IP routing	Static routing
	RIP and RIPng
	OSPFv2
Multicast	IGMP snooping v1/v2
	IGMP fast leave
ACL and QoS	Standard IP ACLs (IP-based hardware ACLs)
	Extended IP ACLs (hardware ACLs based on IP addresses or TCP/UDP port numbers)
	MAC-based extended ACLs (ACLs based on source or destination MAC addresses)
	Expert ACLs
	IPv6 ACL
	ACL 80
	Global ACLs
	ACL redirection
	Flow-based rate limiting at the ingress
	Port rate limiting
	Traffic classification based on 802.1p or DSCP priorities
	Traffic classification based on 802.1p priorities, DSCP priorities, and IP precedences
	Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ

RG-S5000-E Series	
Feature	Description
ACL and QoS	Congestion avoidance: tail drop
	Eight queues on each port
	Rate limiting in each queue
Security	Filtering of invalid MAC addresses
	RADIUS authentication and authorization
	RADIUS and TACACS+
	IEEE 802.1X authentication
	MAC address bypass (MAB) authentication, and interface-based and MAC address-based 802.1X authentication
	Web authentication
	Hypertext Transfer Protocol Secure (HTTPS)
	SSHv1.5 and SSHv2.0
	ICMPv6
	IP source guard
	Proxy ARP and ARP entry aging
	Hardware CPP and NFPP
	Various attack defense functions including NFPP, ARP anti-spoofing, DHCP/DHCPv6 attack defense, ICMP attack defense, ND attack defense, IP scanning attack defense, and customizing attack defense packet types
Reliability	RLDP
	LACP
	Load balancing modes
	Rapid Link Detection Protocol (RLDP), Layer 2 link connectivity detection, and unidirectional link detection
NMS and maintenance	RSPAN
	sFlow (sFlow is a network detection technology based on packet sampling, which is mainly used for traffic statistics analysis in super-heavy network traffic scenarios)

RG-S5000-E Series	
Feature	Description
NMS and maintenance	NTP (NTP client and NTP server)
	TFTP (TFTP client)
	SNMPv1/v2c/v3
	CWMP
	SSH v1.5/v2.0
PoE	RG-S5000-10GT2MS-P-E and RG-S5000-24GT4MS-P-E: ● IEEE 802.3af and 802.3at ● Automatic and energy-saving power supply management mode ● Uninterrupted power supply in hot start mode ● Scheduled powering on or off PoE ports ● Port priority
Cloud	WIS

Note: The item marked with the asterisk (*) will be available in the future.

Product Compliance

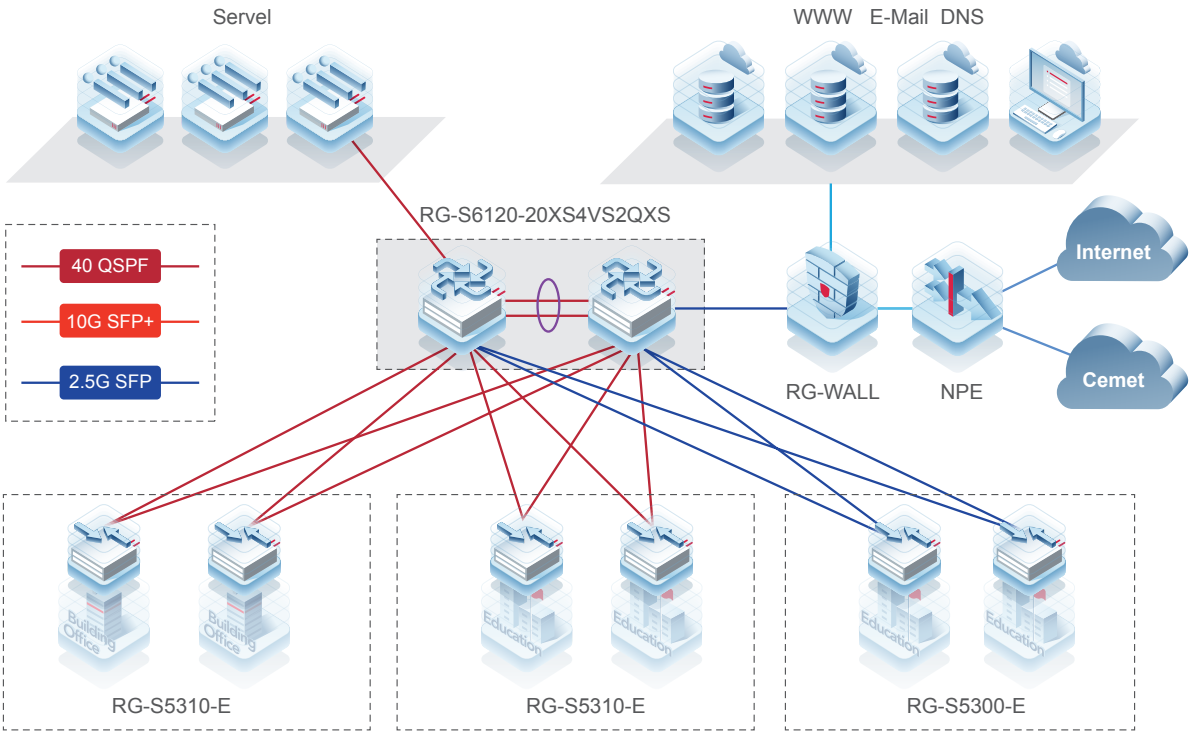
RG-S5000-E Series	
Organization	Standards and Protocol
IETF	RFC 1058 Routing Information Protocol (RIP) RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1583 OSPF Version 2 RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB RFC 1757 Remote Network Monitoring (RMON) RFC 1812 Requirements for IP Version 4 Router RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 1918 Address Allocation for Private Internet RFC 1981 Path MTU Discovery for IP version 6 RFC 2131 Dynamic Host Configuration Protocol (DHCP)

RG-S5000-E Series	
Organization	Standards and Protocol
IETF	RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2328 OSPF Version 2 RFC 2460 Internet Protocol, Version 6 (IPv6) RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 2571 SNMP Management Frameworks RFC 2711 IPv6 Router Alert Option RFC 2863 The Interfaces Group MIB RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3046 DHCP Option82 RFC 3101 OSPF Not-So-Stubby Area Option RFC 3137 OSPF Stub Router Advertisment sFlow RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 3623 Graceful OSPF Restart RFC 4022 MIB for TCP RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4940 IANA Considerations for OSPF RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6 RFC 768 User Datagram Protocol (UDP) RFC 783 TFTP Protocol (revision 2) RFC 792 Internet Control Message Protocol (ICMP) RFC 793 Transmission Control Protocol (TCP) RFC 813 Window and Acknowledgement Strategy in TCP RFC 815 IP datagram reassembly algorithms RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol RFC 959 File Transfer Protocol (FTP)
IEEE	IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control IEEE 802.3bt Power over Ethernet (supported by PoE models only)

Typical Application

Serving as an Access Device on a Small- or Medium-sized Network

The RG-S5000-E is suitable for various scenarios, including medium-sized enterprises, medium-sized universities, primary and middle schools, and government institutions. In these scenarios, the RG-S5000-E functions as an access switch to provide high-performance and large-capacity switching services. It also provides 2.5GE uplink ports and high bandwidth for terminals.



Order Information

Model	Description
RG-S5000-10GT2MS-E	10 x 10/100/1000Base-T electrical ports with auto-negotiation, 2 x 1GE/2.5GE SFP ports, fixed single AC power supply
RG-S5000-10GT2MS-P-E	10 x 10/100/1000Base-T electrical ports with auto-negotiation, 2 x 1GE/2.5GE SFP ports, fixed single AC power supply, ports 1 to 8 supporting PoE/PoE+ power supply, and maximum PoE output power of 125 W
RG-S5000-24GT4MS-E	24 x 10/100/1000Base-T electrical ports with auto-negotiation, 4 x 1GE/2.5GE SFP ports, fixed single AC power supply
RG-S5000-24GT4MS-P-E	24 x 10/100/1000Base-T electrical ports with auto-negotiation, 4 x 1GE/2.5GE SFP ports, fixed single AC power supply, PoE/PoE+ power supply, and maximum PoE output power of 370 W

Model	Description
RG-S5000-48GT4MS-E	48 x 10/100/1000Base-T electrical ports with auto-negotiation, 4 x 1GE/2.5GE SFP ports, fixed single AC power supply
2.5G-SFP-LX03-SM1310-BIDI-I	SFP 2.5G BIDI transceiver-TX1310/RX1550, 3 km, LC
2.5G-SFP-LX03-SM1550-BIDI-I	SFP 2.5G BIDI transceiver-TX1550/RX1310, 3 km, LC
MINI-GBIC-SX-MM850	1000BASE-SX, SFP transceiver, SM (850 nm, 500 m, LC).
MINI-GBIC-LX-SM1310	1000BASE-LX, SFP transceiver, SM (1310 nm, 10 km, LC)
MINI-GBIC-LH40-SM1310	1000BASE-LH, SFP transceiver, SM (1310 nm, 40 km, LC)
MINI-GBIC-ZX80-SM1550	1000BASE-ZX80, SFP transceiver, SM (1550 nm, 80 km, LC)
GE-SFP-LX20-SM1310-BIDI	SFP BIDI Transceiver-TX1310/RX1550, 20 km, LC
GE-SFP-LX20-SM1550-BIDI	SFP BIDI Transceiver-TX1550/RX1310, 20 km, LC
GE-SFP-LH40-SM1310-BIDI	SFP BIDI Transceiver-TX1310/RX1550, 40 km, LC
GE-SFP-LH40-SM1550-BIDI	SFP BIDI Transceiver-TX1550/RX1310, 40 km, LC
Mini-GBIC-GT	1000BASE-TX, SFP transceiver (100 m)

Warranty

For more information about warranty terms and period, contact your local sales agency:

- Warranty terms: *https://www.ruijienetworks.com/support/servicepolicy*
- Warranty period: *https://www.ruijienetworks.com/support/servicepolicy/Service-Support-Summany/*

Note: The warranty terms are subject to the terms of different countries and distributors.

More Information

For more information about Ruijie Networks, visit the official Ruijie website or contact your local sales agency:

- Ruijie Networks official website: *https://www.ruijienetworks.com/*
- Online support: *https://www.ruijienetworks.com/support*
- Hotline support: *https://www.ruijienetworks.com/support/hotline*
- Email support: *service_rj@ruijienetworks.com*

Ruijie Networks Co., Ltd.

For further information, please visit our website https://www.ruijienetworks.com