RG-SF2920 Series
Switches

Product Pictures

RG-SF2920U-4GT1MS-P

RG-SF2920U-8GT1MS

RG-SF2920U-8GT1MS-P

RG-SF2920-16GT2SFP

RG-SF2920-16GT2SFP-P

RG-SF2920-8GT2MG2XS

RG-SF2920-8GT2MG2XS-P

RG-SF2920-16GT2MG2XS

RG-SF2920-16GT2MG2XS-P

Product Overview

RG-SF2920 series switches in Ruijie Networks' Simplified Optical Ethernet (SOE) solution offer an alternative for transmitting data to terminals through optical links. These switches are versatile and can be deployed in various environments, including smart classrooms, multimedia classrooms, offices, clinic wards, mini branches, and other locations with wiring limitations. They cater to the needs of customers in the education, medical, enterprise, and commercial sectors. The switches provide convenient access and ultra-high bandwidth for a multitude of Internet of Things (IoT) devices and other IP-enabled devices such as wireless cameras, ultra HD digital video cameras, and intelligent electronic bedside screens.

The RG-SF2920 offers the following benefits:
- Protecting the service environment: The entire series adopts a heat dissipation architecture with excellent performance. The 4/8/16-port devices use fanless design, ensuring silent operation without causing noise interference in indoor environments such as classrooms and offices.
- The 1G/2.5G/5G/10G ports on 4/8/16-port devices support PoE/PoE+, providing convenient access for mass terminals.
- Compact design with the support for various installation modes: The devices can be flexibly and rapidly installed in various indoor scenarios.
- Dual-network design on one device: The 4/8-port 1000M devices can be equipped with a dual-network expansion module, allowing for unified deployment, installation, and management of two physically isolated networks on one device.
- Enterprise-class high reliability is a fundamental requirement for seamless integration between devices and service scenarios. The innovative power grid fluctuation resistance design protects against interference from the municipal power grid on devices and services. Additionally, the wide temperature design, built-in power supply, 8 kV surge protection on ports, and overall metal housing design ensure stability and reliability in various indoor scenarios.
- The switches support Ruijie SOE solution. They inherit the Ethernet O&M mode and provide quasi-cable optical fiber O&M and locating functions, enabling seamless transition between conventional Ethernet architecture and all-optical networking architecture in network center O&M. Furthermore, these switches offer intelligent O&M features throughout the lifecycle, including plug-and-play deployment and security control.

Product Highlights

- 8 kV Rich port options, supporting PoE+ power supply, with port surge protection exceeding 8 kV
- Compact design, enabling flexible and quick installation, while maintaining quiet operation with less power consumption
- 10GE uplink ports for faster switching as needed

- Enhanced reliability with metal housing, metal network ports, and independent optical module design for stable data forwarding
- Leveraging O&M of Ruijie SOE solution, ensuring simple and effective management, as well as high network reliability and security

Product Features

Ruijie SOE Solution

Ruijie SOE solution is Ruijie Networks' next-generation network architecture designed for application scenarios in education, travel, office, and other campuses. It leverages the deployment of fiber to the home (FTTH) and Ethernet, along with software-defined networking (SDN) technology. This solution offers high-bandwidth, low-latency, flexible, and easy-to-manage network infrastructure to support campus services in the era of the Internet of Everything (IoE). It enables seamless service evolution in the coming decade while ensuring an exceptional user experience and valuable investment.

The switch serves as an end device in an optical link, providing accessible connectivity, service expansion, and high-bandwidth services for indoor terminals. To better support the all-optical network and seamlessly integrate with the service environment, the switch offers the following features:

- Quiet operation
- Dual-network design on one device
- Green energy saving, promoting sustainability
- Compact design with multiple installation modes, enabling flexible and rapid installation while demanding minimal installation requirements
- Enterprise-class high availability
- Advanced security features, including robust security protection policies that allow the device to be deployed in indoor environments instead of limited to dedicated equipment rooms
- Intelligent O&M, with effortless online deployment requiring zero configuration or replacement, along with simplified cable and fiber O&M processes

Quiet Operation

The RG-SF2920 series switches incorporate a cutting-edge hardware architecture, providing quiet operation. The 4/8/16-port devices are designed without fans, ensuring a noise level below 35 dB. For a tranquil environment, a sound level between 30 dB and 40 dB is considered ideal. Despite the absence of fans for cooling, these switches feature a wide temperature design that efficiently dissipates heat and reduces temperatures. As a result, they can function seamlessly in both open and confined spaces with ambient temperatures ranging from 0°C to 45°C. This versatility enables placement in various locations, such as closed weak-current boxes embedded within walls, podium multimedia boxes accommodating other central control devices, as well as cabinets in equipment rooms and classrooms within the engineering training center.

Dual-Network Design on One Device

Within the SF2920 series switches, the 4/8-port 1000M switches offer dual-network expansion modules, allowing for management of two separate networks on a single device. This feature benefits various industries, such as enabling an office network and intelligent private network in education or connecting Intranet and Intranet in the medical industry.

During data transmission, the switch and expansion module connect to two distinct physical networks through independent channels, typically optical fibers. While managing power supply, the expansion module draws power from the switch, ensuring unified power management for both the switch and expansion module.

In terms of installation and deployment, there is no need for the deployment of two sets of devices and accessories within indoor environments.

Green Energy Saving, Promoting Sustainability

In response to China's initiative for green energy conservation, Ruijie has conducted a thorough investigation into the issues of noise and energy consumption in conventional switches. As a result, advanced energy-saving design elements have been seamlessly integrated into the RG-S2920 series switches. These switches effectively eliminate the disruptive noise commonly associated with office deployments, as well as the excessive energy consumption caused by the widespread use of access devices.

The RG-SF2920 series switches incorporate cutting-edge energy-saving circuitry, low power consumption design, and carefully selected components to ensure significant energy conservation. The ports of these switches adhere to the Energy Efficient Ethernet (EEE) standard, reducing device component power consumption by 20%. Additionally, this series of switches comply with the Restriction of Hazardous Substances (RoHS) standard for materials and security.

Compact Design with Multiple Installation Modes

Conventional switches are typically rack-mounted and can only be installed in standard cabinets found in weak-current equipment rooms. If they are to be deployed indoors, there are stringent installation requirements to adhere to. However, the switches feature compact design and elegant white design that meet aesthetic preferences of users in various indoor environments.

The switches come equipped with mounting brackets, enabling flexible installation options. They can be installed in standard cabinets, custom cabinets (weak-current boxes), mounted on walls, placed in podium multimedia boxes, or even positioned under workbenches.

Enterprise-class High Availability

All models of these switch series are constructed with sturdy metal housing and metal network ports. These durable housing provides effective protection against external mechanical collisions, ensuring that the devices operate smoothly.

The industrial-grade device selection further enhances capabilities of these devices. They can withstand temperatures up to 15°C higher than common devices, thereby extending their service life and increasing Mean Time Between Failures (MTBF) by 50% compared to conventional devices.

Moreover, they are equipped with innovative designs that safeguard against power grid fluctuations and surges. This design effectively defends against radio wave interference and provides surge protection of up to 8 kV on the ports. As a result, it ensures stability and reliability of the devices.

RG-SF2920U-4GT1MS-P, RG-SF2920U-8GT1MS, and RG-SF2920U-8GT1MS-P:
These switch models support the Rapid Spanning Tree Protocol (RSTP), which guarantees fast convergence, improves fault tolerance, ensures stable network operation and load balancing of links, utilizes network channels efficiently, and provides redundant link utilization.

RG-SF2920-8GT2MG2XS, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS-P, and RG-SF2920-16GT2MG2XS-P:
These switch models support the Spanning Tree Protocol (STP), RSTP, and Multiple Spanning Tree Protocol (MSTP), which guarantee fast convergence, improve fault tolerance, ensure stable network operation and load balancing of links, utilize network channels efficiently, and provide redundant link utilization.

They also support the Rapid Link Detection Protocol (RLDP), which can quickly detect the connectivity status of links and unidirectional status of fiber links. They also support loop detection on ports to prevent network failures caused by loops formed by devices such as incorrectly connected hubs on ports.

Advanced Security Features

The RG-SF2920 series switches feature a unique hardware CPU protection mechanism called the CPU Protection Policy (CPP). This mechanism intelligently classifies data traffic directed to the CPU, processes it based on queue priority, and enforces bandwidth rate limiting as needed. By doing so, it effectively safeguards the CPU against unauthorized traffic occupancy, malicious attacks, and resource consumption. As a result, it ensures the CPU's security, thereby providing comprehensive protection for the switches.

To safeguard the network infrastructure, the RG-SF2920 series switches employ the innovative Network Foundation

Protection Policy (NFPP) technology. This technology rate-limits ARP packets, ICMP requests, DHCP requests, and other network traffic. Packets that exceed these thresholds are automatically discarded, and attack behaviors are identified and isolated, ensuring the protection of essential network resources. Consequently, the network remains secure, and its stability is guaranteed.

With DHCP snooping, the RG-SF2920 series switches only accept DHCP Response messages from trusted ports, effectively preventing unauthorized DHCP server spoofing. By dynamically monitoring ARP packets, inspecting users' IP addresses, and discarding invalid packets that do not match binding entries, the switches efficiently thwart ARP spoofing and source IP address spoofing incidents. This ensures enhanced network security and mitigates potential risks.

Intelligent O&M

The RG-SF2920 series switches offer seamless device plug-and-play functionality, simplifying network deployment and maintenance. Users can independently perform O&M without the need for professional assistance. Upon connecting to the network, the devices automatically obtain IP addresses through DHCP. They then initiate a self-test process to retrieve preconfigured settings tailored to specific areas, services, and devices. This includes the configuration of ports, such as VLANs, security measures, and manageability features. This streamlined approach minimizes the required workload and eliminates the need for extensive professional knowledge. Moreover, in case of device malfunction or expiration of its service life, the zero-touch replacement technology seamlessly identifies and adjusts to the replacement model. The new device is capable of synchronizing with the port configuration and services of its predecessor effortlessly.

In a network employing all-optical links, the quantity of optical modules and the complexity of O&M exceed those found in networks built using Ethernet cables. To address this, the SOE solution provides optical module and optical link alarms, along with convenient O&M prompts. The alarm locations can be visualized within the network topology, greatly facilitating fault detection and enabling efficient management and O&M practices.

Technical Specifications

Hardware Specifications

Hardware Specifications	RG-SF2920U-4GT1MS-P	RG-SF2920U-8GT1MS	RG-SF2920U-8GT1MS-P
Interface Specifications			
Fixed port	4 x 10/100/1000M auto-negotiation electrical ports, 1 x 1000M/2.5G SFP port, electrical ports 1–4 support PoE/PoE+	8 x 10/100/1000M auto-negotiation electrical ports 1 x 1000M/2.5G SFP optical port	8 x 10/100/1000M auto-negotiation electrical ports 1 x 1000M/2.5G SFP+ port, electrical ports 1–8 support PoE/PoE+
Power module	Fixed single AC power supply		
Fan module	Fanless		
Fixed management port	1 x console port	1 x console port	1 x console port
System Specifications			
Packet forwarding rate	9.7 Mpps	16 Mpps	16 Mpps

Hardware Specifications	RG-SF2920U-4GT1MS-P	RG-SF2920U-8GT1MS	RG-SF2920U-8GT1MS-P
Switching capacity	13 Gbps	21 Gbps	21 Gbps
Number of MAC addresses	16,000		
ARP table size	1000		
Number of ACEs	Ingress: 1500 Egress: 500		
Dimensions and Weight			
Dimensions (W x D x H)	200 mm x 170 mm x 55 mm (7.87 in. x 6.69 in. x 2.17 in.)	200 mm x 170 mm x 43.6 mm (7.87 in. x 6.69 in. x 1.72 in.)	200mm x 170mm x 55 mm (7.87 in. x 6.69 in. x 2.17 in.)
Weight (full configuration, including packaging)	2.23 kg (4.92 lbs)	1.98 kg (4.37 lbs)	2.54 kg (5.60 lbs)
CPU and Storage			
CPU	MAC chip with built-in single-core CPU, 400 MHz	MAC chip with built-in single-core CPU, 400 MHz	MAC chip with built-in single-core CPU, 400 MHz
Storage	16 MB flash memory	16 MB flash memory	16 MB flash memory
Data packet buffer	8 MB	8 MB	8 MB
Power and Consumption			
Maximum power consumption	< 15 W (without PoE full load) < 60 W (with PoE full load)	< 15 W	< 15 W (without PoE full load) < 150 W (with PoE full load)
Rated input voltage	AC input: 200 V AC to 240 V AC @ 50 Hz to 60 Hz		
Maximum input voltage	AC input: 180 V AC to 264 V AC		
Environment and Reliability			
MTBF	40°C (104°F): > 300K		40°C (104°F): > 300K
Primary airflow	Natural heat dissipation		
Operating temperature	Weak-current box: 0°C to 40°C (32°F to 104°F) Desktop and wall: 0°C to 40°C (32°F to 104°F) Rack: (32°F to 113°F)		
Storage temperature	−40°C to +70°C (−40°F to +158°F)		

Hardware Specifications	RG-SF2920U-4GT1MS-P	RG-SF2920U-8GT1MS	RG-SF2920U-8GT1MS-P
Operating humidity	5% to 95% RH (non-condensing)		
Storage humidity	5% to 95% RH (non-condensing)		
Interface surge protection	Power port: 6 kV (common/differential mode) Communication port: 8 kV (common mode)		
Operating altitude	0 m to 5000 m (16404.20 ft.)		

Hardware Specifications (Continued)

Hardware Specifications	RG-SF2920-8GT2MG2XS	RG-SF2920-16GT2MG2XS	RG-SF2920-16GT2SFP
Interface Specifications			
Fixed port	8 x 10/100/1000M auto-negotiation electrical ports 2 x 1000M/2.5G auto-negotiation ports 2 x 1/10G SFP+ ports	16 x 10/100/1000M auto-negotiation electrical ports 2 x 1000M/2.5G auto-negotiation ports 2 x 1/10G SFP+ ports	16 x 10/100/1000M auto-negotiation electrical ports 2 x 1G SFP optical ports
Power module	Fixed single AC power supply		
Fan module	Fanless		
Fixed management port	1 x console port	1 x console port	1 x console port
System Specifications			
Packet forwarding rate	49.1 Mpps	61 Mpps	26.8 Mpps
Switching capacity	66 Gbps	82 Gbps	36 Gbps
Number of MAC addresses	Number of global MAC addresses: 16,000 Number of static MAC addresses: 1,000		
ARP table size	1,000		
Number of IPv4 unicast routes	500		
Number of IPv6 unicast routes	500		
Number of ACEs	Ingress: 1,500 Egress: 500		

Hardware Specifications	RG-SF2920-8GT2MG2XS	RG-SF2920-16GT2MG2XS	RG-SF2920-16GT2SFP
Dimensions and Weight			
Dimensions (W x D x H)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)
Weight (full configuration, including packaging)	2.75 kg (6.06 lbs)	3.11 kg (6.86 lbs)	2.75 kg (6.06 lbs)
CPU and Storage			
CPU	MAC chip with built-in single-core CPU, 1 GHz	MAC chip with built-in single-core CPU, 1 GHz	MAC chip with built-in single-core CPU, 1 GHz
Storage	512 MB SDRAM 256 MB flash memory	512 MB SDRAM 256 MB flash memory	512 MB SDRAM 256 MB flash memory
Data packet buffer	12 MB	12 MB	12 MB
Power and Consumption			
Maximum power consumption	< 25 W	< 25 W (without PoE full load) < 150 W (with PoE full load)	< 25 W
Rated input voltage	AC input: 200 V AC to 240 V AC @ 50 Hz to 60 Hz		
Maximum input voltage	AC input: 180 V AC to 264 V AC		
Environment and Reliability			
MTBF	40°C (104°F): > 300K		
Primary airflow	Natural heat dissipation		
Operating temperature	0°C to 50°C (32°F to 122°F)		
Storage temperature	–40°C to +70°C (–40°F to +158°F)		
Operating humidity	5% to 95% RH (non-condensing)		
Storage humidity	5% to 95% RH (non-condensing)		
Interface surge protection	Power port: 6 kV (common/differential mode) Communication port: 8 kV (common mode)		
Operating altitude	0 m to 5000 m (16404.20 ft.)		

Hardware Specifications (Continued)

Hardware Specifications	RG-SF2920-16GT2SFP-P	RG-SF2920-8GT2MG2XS-P	RG-SF2920-16GT2MG2XS-P
Interface Specifications			
Fixed port	16 x 10/100/1000M auto-negotiation electrical ports 2 x 1G SFP ports Electrical ports 1–8 support PoE/PoE+	8 x 10/100/1000M auto-negotiation electrical ports 2 x 1000M/2.5G/5G auto-negotiation electrical ports 2 x 1G/10G SFP+ ports Electrical ports 1–8 support PoE/PoE+	16 x 10/100/1000M auto-negotiation electrical ports 2 x 1000M/2.5G/5G adaptive electrical ports 2 x 1G/10G SFP+ ports, Electrical ports 1-8 support PoE/PoE+
Power module	Fixed single AC power supply		
Fan module	Fanless		
Fixed management port	1 x console port	1 x console port	1 x console port
System Specifications			
Packet forwarding rate	26.8 Mpps	56.5 Mpps	68.44 Mpps
Switching capacity	36 Gbps	76 Gbps	92 Gbps
Number of MAC addresses	Number of global MAC addresses: 16,000 Number of static MAC addresses: 1,000		
ARP table size	1,000		
Number of IPv4 unicast routes	500		
Number of IPv6 unicast routes	500		
Number of ACEs	Ingress: 1,500 Egress: 500		
Dimensions and Weight			
Dimensions (W x D x H)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)	210 mm x 235 mm x 55 mm (8.27 in. x 9.25 in. x 2.17 in.)
Weight (full configuration, including packaging)	3.1 kg (6.83 lbs)	2.81 kg (6.20 lbs)	3.12 kg (6.88 lbs)

Hardware Specifications	RG-SF2920-16GT2SFP-P	RG-SF2920-8GT2MG2XS-P	RG-SF2920-16GT2MG2XS-P
CPU and Storage			
CPU	MAC chip with built-in single-core CPU, 1 GHz	MAC chip with built-in single-core CPU, 1 GHz	MAC chip with built-in single-core CPU, 1 GHz
Storage	512 MB SDRAM 256 MB flash memory	512 MB SDRAM 256 MB flash memory	512 MB SDRAM 256 MB flash memory
Data packet buffer	12 MB	12 MB	12 MB
Power and Consumption			
Maximum power consumption	< 25 W (without PoE full load) < 150 W (with PoE full load)	< 25 W (without PoE full load) < 150 W (with PoE full load)	< 25 W (without PoE full load) < 150 W (with PoE full load)
Rated input voltage	AC input: 200 V AC to 240 V AC @ 50 Hz to 60 Hz		
Maximum input voltage	AC input: 180 V AC to 264 V AC		
Environment and Reliability			
MTBF	40°C (104°F): > 300K	40°C (104°F): > 300K	40°C (104°F): > 300K
Primary Airflow	Natural heat dissipation		
Operating temperature	0°C to 50°C (32°F to 122°F)		
Storage temperature	–40°C to +70°C (–40°F to +158°F)		
Operating humidity	5% to 95% RH (non-condensing)		
Storage humidity	5% to 95% RH (non-condensing)		
Interface surge protection	Power port: 6 kV (common/differential mode) Communication port: 8 kV (common mode)		
Operating altitude	0 m to 5000 m (16404.20 ft.)		

Software Specifications

RG-SF2920U-4GT1MS-P, RG-SF2920U-8GT1MS, RG-SF2920U-8GT1MS-P	
Feature	**Description**
Ethernet switching	Jumbo frame length: 1,500 bytes

RG-SF2920U-4GT1MS-P, RG-SF2920U-8GT1MS, RG-SF2920U-8GT1MS-P	
Feature	**Description**
Ethernet switching	802.3az EEE
	Maximum number of VLANs that can be created: 128
	Interface-based VLAN assignment
	RSTP (IEEE 802.1w)
	LLDP
IP service	DHCP client
Security	Port protection
	Port security
	CPP
	Broadcast storm suppression
	Login authentication and password security
Reliability	SNTP
	CLI-based configuration and management not required, and visualized web management MQTT Syslog/Debugging
PoE	RG-SF2920U-4GT1MS-P, RG-SF2920U-8GT1MS-P: ● IEEE 802.3af (15.4 W) and IEEE 802.3at (30 W) ● Energy-efficient power supply management modes ● Warm start to implement uninterrupted power supply

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

Software Specifications (Continued)

RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS, RG-SF2920-8GT2MG2XS-P, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2MG2XS-P	
Feature	**Description**
Ethernet switching	Jumbo frame length: 9,216 bytes

RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS, RG-SF2920-8GT2MG2XS-P, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2MG2XS-P	
Feature	**Description**
Ethernet switching	IEEE 802.3az EEE
	Maximum number of VLANs that can be created: 4,094
	Voice VLAN
	Private VLAN
	MAC VLAN MAC address-based, port-based, protocol-based, and IP subnet-based VLAN assignment
	GVRP
	Basic QinQ and flexible QinQ
	STP (IEEE 802.1.d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	ERPS (G.8032) with switching time ≤ 50 ms
	LLDP/LLDP-MED
IP service	DHCP server, DHCP client, DHCP snooping, and DHCP snooping
	DNS
	DHCPv6 client, DHCPv6 relay, and DHCPv6 snooping
	Neighbor Discovery (ND)
IP routing	Static routing
	Static blackhole routing
	RIP v1/v2 and RIPng
	OSPFv2 and OSPFv3
	GR
Multicast	IGMPv1/v2/v3 snooping
	IGMP fast leave

RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS, RG-SF2920-8GT2MG2XS-P, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2MG2XS-P	
Feature	**Description**
ACL and QoS	Standard IP ACLs (IP-based hardware ACLs)
	Extended IP ACLs
	Extended MAC ACLs
	Expert-level ACLs
	ACL80 and IPv6 ACLs
	ACLs on Layer 2 and Layer 3 interfaces
	Applying ACLs globally (hardware ACLs based on flexible combinations of the VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time range)
	ACL redirection
	Traffic classification based on 802.1p priorities, DSCP priorities, and IP precedences
	Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, SP+WFR, and SP+WFQ
	Congestion avoidance: tail drop
	Rate limiting based on the inbound or outbound interface
	Eight queues on each port
	Rate limiting in each queue
Security	RADIUS and TACACS+
	RADIUS authentication and authorization
	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

RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS, RG-SF2920-8GT2MG2XS-P, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2MG2XS-P	
Feature	**Description**
Security	Global IP-MAC binding
	ICMP (discarding ICMP packets of which the rate exceeds the threshold on an interface)
	Port security
	BPDU guard
	Filtering of invalid MAC addresses
	Broadcast storm suppression
	Hierarchical management of administrators and password protection
	IP source guard
	ARP spoofing prevention
	CPP and NFPP
	DAI Portal authentication Login authentication and password security Unknown unicast suppression
	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	REUP
	Rapid Link Detection Protocol (RLDP), Layer 2 link connectivity detection, unidirectional link detection, and VLAN-based loop control
	Load balancing LACP dynamic aggregation The LACP priority, negotiation mode, and maximum number of ports that can be aggregated can be configured. Cross-VSU aggregate interface
	DLDP
	IPv4 VRRP v2/v3, IPv6 VRRPv3
	GR for OSPF

| RG-SF2920-16GT2SFP, RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS, RG-SF2920-8GT2MG2XS-P, RG-SF2920-16GT2MG2XS, RG-SF2920-16GT2MG2XS-P	
Feature	**Description**
NMS and Maintenance	RSPAN and ERSPAN
	Flow- and VLAN-based SPAN
	sFlow (network detection technology based on packet sampling, which is mainly used for traffic statistics and analysis in heavy-traffic scenarios)
	NTP and SNTP
	1:1 mirroring, N:1 mirroring, and 1:N mirroring Cross-device traffic mirroring SPAN, RSPAN, and ERSPAN
	FTP and TFTP
	SNMP v1/v2c/v3
	RMON (1, 2, 3, 9)
	CLI (Telnet/console), Syslog/debugging, and web
	Various types of RMON groups, including event groups, alarm groups, history groups, and statistics groups, as well as private alarm extension groups RMON used to implement Ethernet statistics, historical statistics, and alarm functions
	CWMP
	OpenFlow Special 1.0/1.3
	Periodic and automatic restoration of the port in errdisable state
	Flow table analysis defined by all protocols Transmission of specified packets to the controller Configuring the controller's IP address and port Notifying port status changes to the controller
PoE	RG-SF2920-16GT2SFP-P, RG-SF2920-8GT2MG2XS-P, and RG-SF2920-16GT2MG2XS-P: ● Electrical ports in compliance with IEEE 802.3af (15.4 W) and IEEE 802.3at (30 W) ● Automatic and energy-efficient power supply management modes ● Warm start to implement uninterrupted power supply ● Port priority

Protocol Compliance

RG-SF2920 Series	
Organization	**Standards and Protocol**
IETF	RFC 1349 Internet Protocol (IP) RFC 1519 CIDR RFC 1643 Ethernet Interface MIB RFC 1812 Requirements for IP Version 4 Router RFC 1918 Address Allocation for Private Internet RFC 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2863 The Interfaces Group MIB RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3046 DHCP Option82 RFC 4022 MIB for TCP RFC 768 User Datagram Protocol (UDP) 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 4291 IP Version 6 Addressing Architecture RFCs supported by the SF2920 but not supported by the SF2920U: RFC 1591 Domain Name System Structure and Delegation RFC 854 Telnet Protocol RFC 1757 Remote Network Monitoring (RMON) RFC 3575 IANA Considerations for RADIUS RFC 792 Internet Control Message Protocol (ICMP) RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1350 TFTP Protocol (revision 2) RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 2571 SNMP Management Frameworks RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3579 RADIUS Support For EAP RFC 783 TFTP Protocol (revision 2) RFC 959 File Transfer Protocol (FTP) RFC 1058 Routing Information Protocol (RIP) RFC 1583 OSPF Version 2 RFC 1981 Path MTU Discovery for IP version 6 RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2460 Internet Protocol, Version 6 (IPv6) RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)

RG-SF2920 Series	
Organization	Standards and Protocol
IETF	RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 4443 ICMPv6 RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3973 PIM Dense Mode 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 6620 FCFS SAVI RFC 4251 The Secure Shell (SSH) Protocol RFC 4252 SSHv6 Authentication RFC 4861 IPv6 Neighbor Discovery RFC 5798 VRRP RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms
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 802.1AB 2005 IEEE Std 802.3ab 1000BASE-T IEEE Std 802.3z Gigabit Ethernet Standard Protocols supported by the SF2920 series but not SF2920U series: IEEE 802.1p Priority IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering Protocol supported by PoE series: IEEE 802.3bt Power over Ethernet

Typical Applications

The RG-SF2920 series switches serve as indoor switches in the SOE solution. The following figure shows the typical application topology.
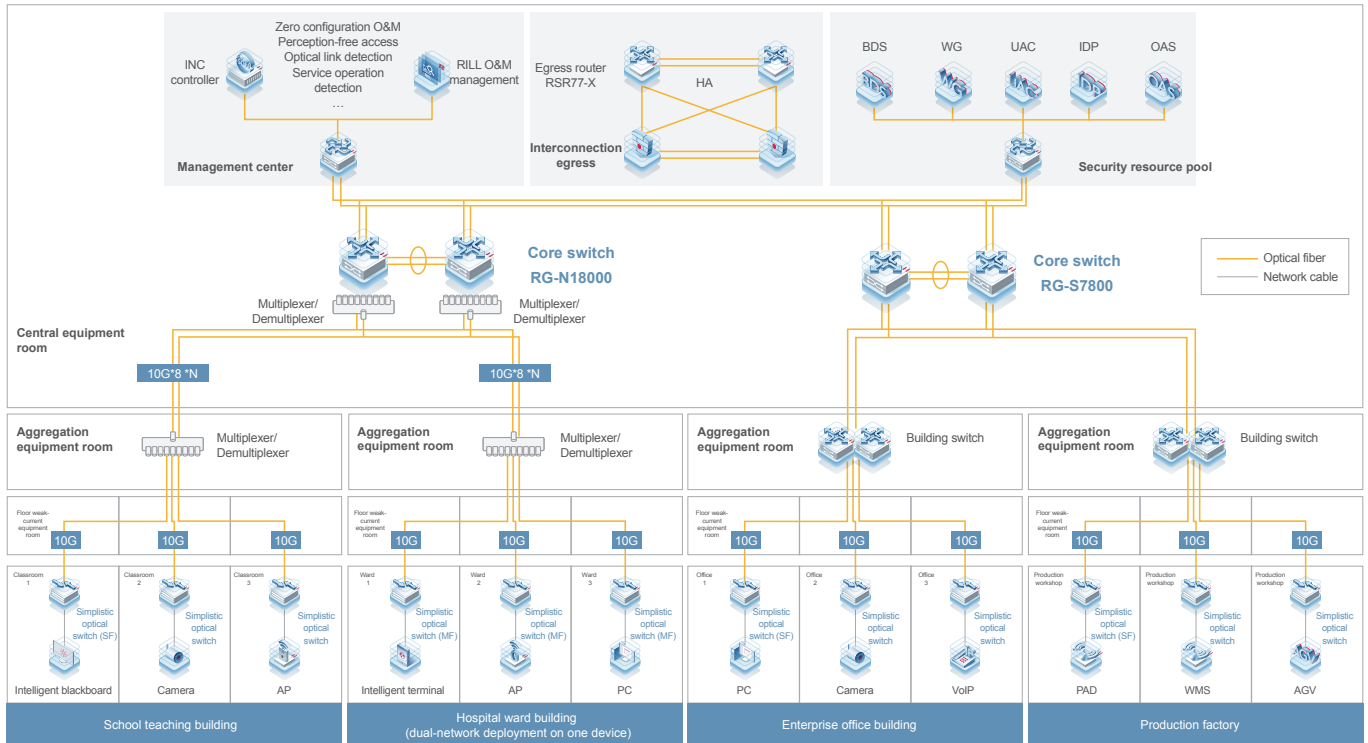
Ordering Information

Model	Description
RG-SF2920U-4GT1MS-P	4 x 10/100/1000M auto-negotiation electrical ports, 1 x 1000M/2.5G SFP port, fixed single AC power supply; electrical ports 1–4 support PoE/PoE+; maximum PoE output power: 45 W
RG-SF2920U-8GT1MS	8 x 10/100/1000M auto-negotiation electrical ports, 1 x 1000M/2.5G SFP port, fixed single AC power supply
RG-SF2920U-8GT1MS-P	8 x 10/100/1000M auto-negotiation electrical ports, 1 x 1000M/2.5G SFP port, fixed single AC power supply; electrical ports 1–8 support PoE/PoE+; maximum PoE output power: 125 W
RG-SF2920-16GT2SFP	16 x 10/100/1000M auto-negotiation electrical ports, 2 x 1G SFP ports, fixed single AC power supply
RG-SF2920-16GT2SFP-P	16 x 10/100/1000M auto-negotiation electrical ports, 2 x 1G SFP ports, fixed single AC power supply; electrical ports 1–8 support PoE/PoE+; maximum PoE output power: 125 W
RG-SF2920-8GT2MG2XS	8 x 10/100/1000M auto-negotiation electrical ports, 2 x 1000M/2.5G adaptive ports, 2 x 1/10G SFP+ ports, fixed single AC power supply

Model	Description
RG-SF2920-8GT2MG2XS-P	8 x 10/100/1000M auto-negotiation electrical ports, 2 x 1000M/2.5G/5G auto-negotiation electrical ports, 2 x 1/10G SFP+ ports, fixed single AC power supply; electrical ports 1–8 support PoE/PoE+; maximum PoE output power: 125 W
RG-SF2920-16GT2MG2XS	16 x 10/100/1000M auto-negotiation electrical ports, 2 x 1000M/2.5G adaptive ports, 2 x 1/10G SFP+ ports, fixed single AC power supply
RG-SF2920-16GT2MG2XS-P	16 x 10/100/1000M auto-negotiation electrical ports, 2 x 1000M/2.5G/5G auto-negotiation electrical ports, 2 x 1/10G SFP+ ports, fixed single AC power supply; electrical ports 1-8 support PoE/PoE+; maximum PoE output power: 125 W

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