RG-S7800C Series
Multi-service Core Switch

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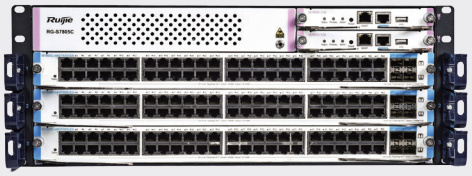
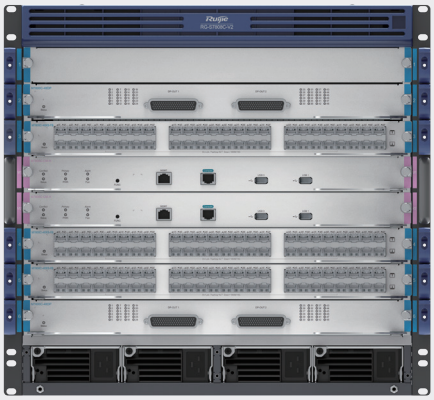
Ruijie

Product Pictures

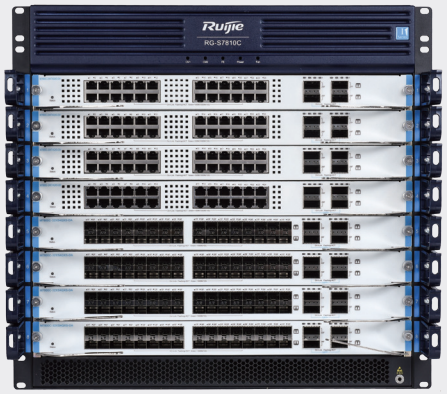


RG-S7805C

RG-S7808C



RG-S7808C-V2



RG-S7810C

Product Overview

The RG-S7800C series switches, multi-service core switches released by Ruijie Networks for next-generation converged networks, integrate features of campus networks and data centers.

Using the modular operating system (OS), the RG-S7800C supports IPv4, IPv6, and other network services, satisfying application requirements of the Ethernet in the future. In addition, it supports Virtual Switching Unit (VSU) that simplifies customers' network architecture and improves O&M efficiency.

The RG-S7800C series switches can be deployed on MANs, campus networks, and data centers based on service requirements. They lay a foundation for high-performance networks that support IoT service lifecycle management, mobility applications, and cloud applications.

Product Highlights

- Employs the advanced Clos multi-level multi-plane architecture to separate the control plane from the forwarding plane. This ensures non-blocking switching at line rate among all interfaces, and delivers continuous bandwidth upgrade and service support capabilities.
- Provides highly-efficient energy-saving system and power supply system, supports dynamic power management, and is equipped with intelligent fan modules for multi-level speed regulation, significantly reducing energy consumption.
- Uses RGOS modular operating system to provide more entries, faster hardware processing, and better operation experience.
- Provides open and programmable RGOS modular operating system. Basic functions are incorporated into the main version, and custom functions are released in app mode, ensuring stability of the basic functions.
- Supports the x86 platform, which supports containers, allows third-party management applications to be installed, and makes it easy for customizing functions.
- Rectifies faults related to processes online in seconds, without interrupting network operation.
- Supports Python that allows applications across platforms.
- Supports high-speed access to northbound interfaces, with the performance of up to thousands of operations. It can associate with the controller to upgrade the man-machine interface to machine-machine interface.
- Upgrades and extends functions online to ensure nonstop services.
- Is suitable for a mobile network or an IoT of a large campus where thousands of terminals are deployed; automatically isolates multiple service networks, which is independent of interfaces and locations. This simplifies deployment.
- Securely connects to and isolates IoT terminals and users.
- Copes with lossless operation of services on a mobile network or the Internet with its high bandwidth, achieving service continuity.
- Is used as the core device of a campus network or the IoT service, with powerful performance and high reliability to intelligently connect to IoT terminals and mobile terminals.

Product Features

Power Supply/Fiber Transmission Integration

RG-S7808C-V2 series switches are primarily used in the PoF solution. The PoF solution distinguishes itself with its unique application scenario, utilizing hybrid cables in the traditional SOE solution. This innovative approach enables centralized power supply for endpoint devices from the core equipment room, hassle-free deployment of indoor switches without the need for high-power connections, power supply for remote network devices over ultra-long distance, seamless integration and management of network and power supply systems, simplified installation of SOE switches, and significant cost savings in project construction. It greatly saves CAPEX and OPEX during campus network construction.

On-demand Resource Allocation Based on Virtualization

The RG-S7800C series switches adopt VSU 3.0 to virtualize multiple physical devices into one logical device for unified operation and management, substantially reducing network nodes and lowering network O&M personnel's workload. They can implement fast switchover within 50 ms to 200 ms upon link failures, ensuring nonstop transmission of key services and enhancing network reliability. The inter-device link aggregation technology implements dual active uplinks for access servers and switches, doubling the bandwidth of effective connections.

Carrier-Class High Reliability

The RG-S7800C series switches applies the redundancy design to all key components, including 1+1 redundancy for supervisor modules and fan modules, and N+M redundancy for power modules. All redundant components are hot-swappable, which maximizes the reliability and availability of the switch.

The RG-S7800C series switches support GR for OSPF/IS-IS/BGP and BFD for VRRP/OSPF/BGP4/ISIS/ISISv6/static routing. They implement fast fault detection within 50 ms for various protocols.

The RG-S7800C provides visualized hardware health status, making it easy for a network administrator to monitor the fan status, power, temperature, and onboard voltage. In particular, the network administrator can identify voltage exceptions during routine inspection and handle the exceptions in a timely manner, thereby preventing system breakdown caused by such exceptions.

The RG-S7800C employs the fault isolation technology to monitor the optical module status. If an optical module is faulty, the optical module is isolated and has no impact on the running of other interfaces or the switch. After the faulty optical module is replaced, the corresponding interface is restored immediately.

Clos Architecture for Non-Blocking Switching

The RG-S7800C features advanced Clos multi-level multi-plane architecture, which can separate the control plane from the forwarding plane. That is, it can be independently configured with switch fabric modules and supervisor modules to ensure non-blocking switching at line rate among all ports, delivering continuous bandwidth upgrade and service support capabilities.

It uses the complete orthogonal design for line cards and switch fabric modules. Traffic is transmitted to the switch fabric module through the orthogonal connector for switching, with zero cabling on the backplane and low transmission loss. This greatly reduces signal attenuation and improves the service traffic transmission efficiency in the switch.

Sound QoS Policies

The RG-S7800C can classify and control various flows, such as MAC flows, IP flows, and application flows, to implement different policies such as fine-grained bandwidth control and forwarding priority. In this way, it provides differentiated services based on applications and characteristics of service quality required by the applications.

It provides QoS guarantee based on the DiffServ model, and can filter traffic based on 802.1p priorities and IP ToS values, and from Layer 2 to Layer 7. It supports SP, WRR, and other QoS policies.

SDN

The RG-S7800C supports OpenFlow and NETCONF, and allows the live network to be smoothly upgraded to a software-defined networking (SDN) network. This substantially reduces network maintenance costs while greatly simplifying network management.

High Energy Efficiency

The RG-S7800C is equipped with power modules to deliver power efficiently.

The multi-core CPU supports dynamic power consumption management, and all electrical interfaces support Energy Efficient Ethernet (EEE), reducing power consumption at low loads.

The intelligent fan modules support 256-level speed regulating and precise temperature control, saving energy and reducing noise. This allows the switch to run at a high temperature for a long time and adapt to severe environments, greatly lowering power consumption.

Ease of Network Maintenance

The RG-S7800C supports the hardware monitoring system in 1+1 redundancy mode to centrally monitor status parameters such as the card, fan module, power module, power supply, and environment parameters.

The RG-S7800C supports routine network diagnosis and maintenance based on the Simple Network Management Protocol (SNMP), Remote Network Monitoring (RMON), Syslog, and other features. A network administrator can use various management and maintenance modes such as command line interface (CLI), web network management, and Telnet to facilitate device management.

Telemetry based on gRPC enables it to periodically collect information about CPU, memory, and other components.

With simplified optical management software and service template embedded in the RG-S7800C, the RG-S7800C

can be deployed quickly. In addition to network service planning, the RG-S7800C supports plug and play, zero-touch replacement, zero-touch provisioning (ZTP), and optical link fault detection and alarms.

Product Specifications

Hardware Specifications

Hareware Specifications	RG-S7805C	RG-S7808C	RG-S7810C	RG-S7808C-V2
Interface Specifications				
Power module	2	2	4	4
Supervisor module slot	2	2	2	2
Line card slot	3	6	8	6
Switch fabric module slot	Built-in	2 (integrated with supervisor modules)	4 (2 are integrated with supervisor modules)	2 (integrated with supervisor modules)
System Specifications				
Packet forwarding rate	4,500 Mpps	9,000 Mpps	12,000 Mpps	9,000 Mpps
System switching capacity	6 Tbps	12 Tbps	16 Tbps	12 Tbps
MAC address	• Number of global MAC addresses EB card: 64,000 DA card: 96,000 (default) and 288,000 (max.) FA card: 80,000 FB card: 96,000 • Number of static MAC addresses EB card: 4,000 DA card: 10,000 FA card: 4,000 • FB card: 40,000			
ARP table	EB card: 10,000 (default and recommended) DA card: underlay: 75,000; overlay: 0 (default and recommended) FA card: underlay: 30,000; overlay: 0 FB card: underlay: 50,000; overlay: 0 (default and recommended)			
Number of IPv4 unicast routes	EB card: 12,000 (default and recommended, shared with IPv6 routes) DA card: 12,000 (default and recommended, shared with IPv6 routes) FA card: 12,000 (default and recommended, shared with IPv6 routes) FB card: 134,000 (default and recommended, shared with IPv6 routes)			
Number of IPv4 multicast routes	EB card: 8,000 DA card: 16,000 FA card: 8,000 FB card: 16,000			

Hareware Specifications	RG-S7805C	RG-S7808C	RG-S7810C	RG-S7808C-V2
Number of IPv6 unicast routes	EB card: 6,000 (shared with IPv4 routes) DA card: 6,000 (shared with IPv4 routes) FA card: 6,000 (shared with IPv4 routes) FB card: 50,000 (shared with IPv4 routes)			
Number of IPv6 multicast routes	EB card: 4,000 DA card: 8,000 FA card: 4,000 FB card: 8,000			
Number of ACEs	• Ingress EB card: 3,500 DA card: 8,000 FA card: 5,000 FB card: 4,500 • Egress EB card: 1,000 DA card: 1,000 FA card: 1,000 • FB card: 2,000			
Number of VSU members	2	2	2	2
Dimensions and Weight				
Dimensions (W x D x H)	442 mm x 451 mm x 175 mm (17.40 in. x 17.76 in. x 6.89 in., 4 RU)	442 mm x 465mm x 441.7 mm (17.40 in. x 18.31 in. x 17.39 in., 10 RU)	442.5 mm x 560 mm x 442 mm (17.42 in. x 22.05 in. x 17.40 in., 10 RU)	442 mm x 465mm x 441.7 mm (17.40 in. x 18.31 in. x 17.39 in., 10 RU)
Weight (empty chassis and fan modules)	32.35 kg (71.32 lbs)	35.6 kg (78.48 lbs)	43.6 kg (96.12 lbs)	35.6 kg (78.48 lbs)
CPU and Storage				
CPU	• Supervisor module M7805C-CM/ M7805C-CM II: 1.5 GHz quad-core processor • Service module EA/EB card: 1.0 GHz quad-core processor DA/F card: 1.5 GHz quad-core processor	• Supervisor module M7800C-CM: 1.0 GHz quad-core processor M7808C-CM II: 1.5 GHz quad-core processor • Service module EA/EB card: 1.0 GHz quad-core processor DA/F card: 1.5 GHz quad-core processor	• Supervisor module M7808C-CM II: 1.5 GHz quad-core processor • Service module EB card: 1.0 GHz quad-core processor DA/F card: 1.5 GHz quad-core processor • Switch fabric module M7810C-FE-D I/ M7810C-FE-F I: 1.5 GHz quad-core processor	• Supervisor module M7808C-CM II: 1.5 GHz quad-core processor • Service module EA/EB card: 1.0 GHz quad-core processor • DA/F card: 1.5 GHz quad-core processor

Hareware Specifications	RG-S7805C	RG-S7808C	RG-S7810C	RG-S7808C-V2
Storage	Flash memory M7805C-CM/ M7805C-CM II: 1 GB EA card: 512 MB EB card: 512 MB DA/F card: 8 GB SDRAM M7805C-CM/ M7805C-CM II: DDRIII 4 GB EA card: DDR3 1 GB EB card: DDRIII 1 GB DA card: DDR4 1 GB F card: DDR4 2 GB	Flash memory Supervisor module: M7800C-CM/ M7808C-CM II: 8 GB Service module: EA card: 512 MB EB card: 512 MB DA/F card: 8 GB SDRAM Supervisor module: M7800C-CM: DDR3 4 GB M7808C-CM II: DDR4 4 GB Service module: EB card: DDR3 1 GB DA card: DDR4 1 GB F card: DDR4 2 GB	Flash memory Supervisor module: M7810C-CM/ M7810C-CM-F: 8 GB Service module: EB card: 512 MB DA/F card: 8 GB Switch fabric module: M7810C-FE-D I: 8 GB M7810C-FE-F I: 8 GB SDRAM Supervisor module: M7810C-CM/ M7810C-CM-F: DDR4 4 GB Service module: EB card: DDR3 1 GB DA card: DDR4 1 GB F card: DDR4 2 GB Switch fabric module: M7810C-FE-D I card: DDR4 1 GB M7810C-FE-F I: DDR4 2 GB	Flash memory Supervisor module: M7808C-CM II: 8 GB Service module: EA card: 512 MB EB card: 512 MB DA/F card: 8 GB SDRAM Supervisor module: M7808C-CM II: DDR4 4 GB Service module: EB card: DDR3 1 GB DA card: DDR4 1 GB F card: DDR4 2 GB
Power and Consumption				
Maximum power consumption	Chassis RG-S7805C: < 80 W Supervisor module: M7805C-CM II: < 21 W Service module: M7800C-24SFP/12GT4XS-EB: < 85 W M7800C-36GT12SFP4XS-EB: < 80 W M7800C-48GT4XS-EB: < 70 W M7800C-48SFP4XS-EB: < 101 W M7800C-24GT24SFP4XS-EB: < 88 W M7800C-32XS4QXS-DA: < 210 W	Chassis RG-S7808C: < 176 W Supervisor module: M7808C-CM II: < 50 W Service module: M7800C-24SFP/12GT4XS-EB: < 85 W M7800C-36GT12SFP4XS-EB: < 80 W M7800C-48GT4XS-EB: < 70 W M7800C-48SFP4XS-EB: < 101 W M7800C-24GT24SFP4XS-EB: < 88 W M7800C-32XS4QXS-DA: < 210 W	Chassis RG-S7810C: < 432 W Supervisor module: M7810C-CM: < 50 W M7810C-CM-F: < 110 W Service module: M7800C-24SFP/12GT4XS-EB: < 85 W M7800C-36GT12SFP4XS-EB: < 80 W M7800C-48GT4XS-EB: < 70 W M7800C-48SFP4XS-EB: < 101 W M7800C-24GT24SFP4XS-EB: < 88 W M7800C-32XS4QXS-DA: < 210 W	Chassis RG-S7808C-V2: < 176 W Supervisor module: M7808C-CM II: < 50 W Service module: M7800C-24SFP/12GT4XS-EB: < 85 W M7800C-36GT12SFP4XS-EB: < 80 W M7800C-48GT4XS-EB: < 70 W M7800C-48SFP4XS-EB: < 101 W M7800C-24GT24SFP4XS-EB: < 88 W M7800C-32XS4QXS-DA: < 210 W

Hareware Specifications	RG-S7805C	RG-S7808C	RG-S7810C	RG-S7808C-V2
Maximum power consumption	M7800C-24XT4QXS-DA: < 245 W M7800C-48GT-FA: < 75 W M7800C-48SFP-FA: < 95 W M7800C-48XS-FB: < 160 W M7800C-4CQ-FB: < 120 W M7800C-8CQ-FB: < 130 W	M7800C-24XT4QXS-DA: < 245 W M7800C-48GT-FA: < 75 W M7800C-48SFP-FA: < 95 W M7800C-48XS-FB: < 160 W M7800C-4CQ-FB: < 120 W M7800C-8CQ-FB: < 130 W	M7800C-24XT4QXS-DA: < 245 W M7800C-48GT-FA: < 75 W M7800C-48SFP-FA: < 95 W M7800C-48XS-FB: < 160 W M7800C-4CQ-FB: < 120 W M7800C-8CQ-FB: < 130 W Switch fabric module: M7810C-FE-D I: < 50 W M7810C-FE-F I: < 105 W	M7800C-24XT4QXS-DA: < 245 W M7800C-48GT-FA: < 75 W M7800C-48SFP-FA: < 95 W M7800C-48XS-FB: < 160 W M7800C-4CQ-FB: < 120 W M7800C-8CQ-FB: < 130 W
Maximum output power	• RG-PA300I-F: 300 W • RG-PA460I-F: 460 W	• RG-PA600I-F: 600 W • RG-PA1600I-F: 90 V to 180 V: 12,00 W 180 V to 264 V: 1,600 W • RG-PD600I-F: 600 W • RG-PA8	• RG-PA600I: 600 W • RG-PA1600I: 90 V to 180 V: 1,200 W 180 V to 264 V: 1,600 W • RG-PD600I: 600 W • RG-PD1600I: 1,400 W	• RG-PA600I-F: 600 W • RG-PA1600I-F: 90 V to 180 V: 12,00 W 180 V to 264 V: 1,600 W • RG-PD600I: 600 W
Environment and Reliability				
MTBF	> 200,000 hours			
Primary Airflow	• Supervisor module Right-to-left airflow • Service module Right-to-rear airflow • System power module Built-in fan modules drawing air outward Front-to-rear airflow	• Supervisor module /Service module Right-to-rear airflow • System power module Front-to-rear airflow	• Line card Side-to-rear airflow • Supervisor module/FE Front-to-rear airflow	• Supervisor module /Service module Right-to-rear airflow • System power module Front-to-rear airflow
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	10% to 90% RH (non-condensing)			
Storage humidity	5% to 95% RH (non-condensing)			
Operating altitude	–500 m to +5,000 m (–1640.42 ft. to +16404.20 ft.)			

Hareware Specifications	RG-S7805C	RG-S7808C	RG-S7810C	RG-S7808C-V2
Operating noise	55.9 dB at the temperature of 35°C (95°F) 73.4 dB at the temperature of 50°C (122°F)			
Interface surge protection	All electrical ports support 4 kV surge protection in common mode or 1 kV surge protection in differential mode.	Power port: 6 kV Telecom port: 4 kV (MGMT port)		

Software Specifications

RG-S7800C Series	
Feature	Description
Ethernet switching	Jumbo frame (maximum length: 9,216 bytes)
	802.3az EEE
	Maximum number of VLANs that can be created: 4,094
	Voice VLAN
	Super-VLAN and private VLAN
	MAC address-based, port-based, protocol-based, and IP subnet-based VLAN assignment
	GVRP
	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
	DHCP relay

RG-S7800C Series	
Feature	Description
IP service	DHCP server
	DHCP snooping
	DNS
	DHCPv6 client, DHCPv6 relay, and DHCPv6 snooping
	Neighbor Discovery (ND) and ND snooping
	Manual tunnel, automatic tunnel, and ISATAP tunnel for IPv6
	GRE tunnel
IP routing	Static routing
	RIP and RIPng
	OSPFv2 and OSPFv3
	GR
	IPv4/IPv6 IS-IS
	BGP4 and BGP4+
	EVPN
	IPv4/IPv6 VRF
	Policy-based routing (PBR)
	IPv4 and IPv6 ECMP
Multicast	IGMP v1/v2/v3
	IGMP snooping v1/v2/v3
	IGMP proxy
	IGMP fast leave

RG-S7800C Series	
Feature	Description
Multicast	PIM-DM, PIM-SM, and PIM-SSM
	PIM-SSM for IPv4 and IPv6
	MSDP to achieve inter-domain multicast
	MLDv1 and MLDv2
	Multicast static routing
	MLD v1/v2 snooping
	PIM-SMv6
	Multicast source IP address check Multicast source port check
MPLS	MPLS IPv6
	MPLS L3VPN
	MPLS 6VPE
	MPLS MIB (RFC 1273, RFC 4265, and RFC 4382)
ACL and QoS	Standard IP ACLs (hardware ACLs based on IP addresses)
	Extended IP ACLs (hardware ACLs based on IP addresses or TCP/UDP port numbers)
	Extended MAC ACLs (hardware ACLs based on source MAC addresses, destination MAC addresses, and optional Ethernet type)
	Expert-level ACLs (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)
	ACL80 and IPv6 ACL
	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
	Port traffic identification
	Port-based rate limiting

RG-S7800C Series	
Feature	Description
ACL and QoS	802.1p
	Traffic classification based on 802.1p priorities, DSCP priorities, and IP precedences
	CAR
	Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ
	Congestion avoidance: tail drop, RED, and WRED
	Eight queues on each port
Security	AAA
	RADIUS authorization and accounting
	TACACS+
	Portal authentication, RADIUS, and TACACS+ login authentication
	IEEE802.1X authentication, MAC address bypass (MAB) authentication, and interface-based and MAC address-based 802.1X authentication
	Web authentication
	Hypertext Transfer Protocol Secure (HTTPS)
	SSHv1 and SSHv2
	Global IP-MAC binding
	ICMP
	Port security
	IP source guard
	DAI
	SAVI
	ARP spoofing prevention

RG-S7800C Series	
Feature	Description
Security	CPU Protect Policy (CPP) and NFPP
	Various attack defense functions, including NFPP and ARP anti-attack
	uRPF Login authentication and password security Unknown multicast packets are not sent to the CPU, and unknown unicast packets can be suppressed.
Reliability	Rapid Ethernet Uplink Protection (REUP)
	Rapid Link Detection Protocol (RLDP), Layer 2 link connectivity detection, unidirectional link detection, and VLAN-based loop control
	Data Link Detection Protocol (DLDP)
	IPv4 VRRP v2/v3 and IPv6 VRRP
	VRRP for the super-VLAN
	BFD
	1+1 redundancy for supervisor modules and fan modules, and N+M redundancy for power modules
	Hot swapping of components
	Hot patch and online installation of patches
	GR for OSPF/IS-IS/BGP
	BFD for VRRP/OSPF/BGP4/ISIS/ISISv6/static routing
Device virtualization	VSU
NMS and maintenance	SPAN, RSPAN, and ERSPAN
	sFlow
	NTP
	SNTP
	FTP, TFTP, and Xmodem

RG-S7800C Series	
Feature	Description
NMS and maintenance	SNMP v1/v2c/v3
	RMON (1, 2, 3, 9)
	NETCONF
	CWMP
	gRPC
	OpenFlow Special 1.3 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
	Web-based NMS
	Console/Telnet/SSH2.0 CLI configuration Fault alarms and auto-recovery System operation logging
VXLAN	Layer 2 and Layer 3 VXLAN gateways

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

Protocol Compliance

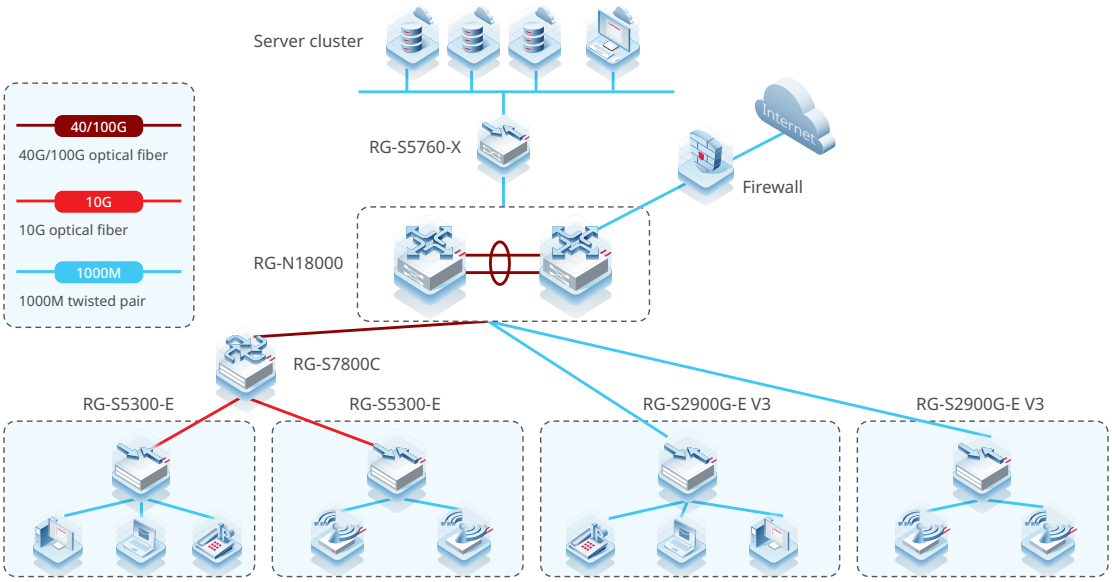
RG-S7800C Series	
Organization	Standards and Protocol
IETF	RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB

RG-S7800C Series	
Organization	Standards and Protocol
IETF	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 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2571 SNMP Management Frameworks 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 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 4022 MIB for TCP 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) RFC 1058 Routing Information Protocol (RIP) RFC 1583 OSPF Version 2 RFC 1981 Path MTU Discovery for IP version 6 RFC 1997 BGP Communities Attribute RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option RFC 2439 BGP Route Flap Damping 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 2545 Use of BGP 4 Multiprotocol Extensions for IPv6 Inter Domain Routing RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2918 Route Refresh Capability for BGP 4 RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3065 Autonomous System Confederation for BGP RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow

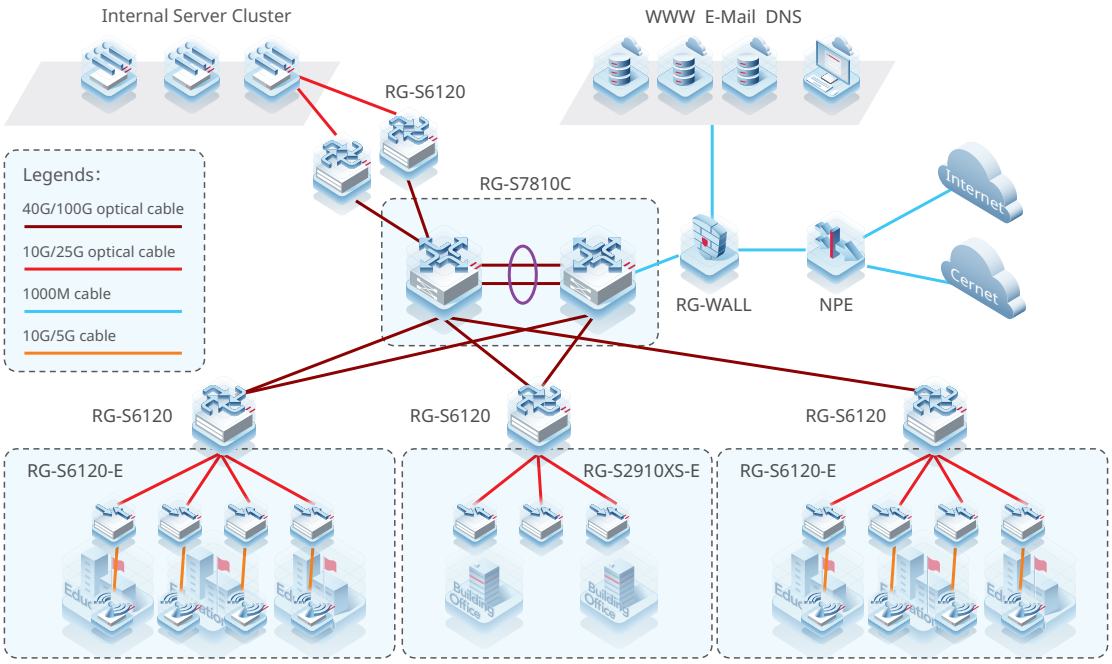
RG-S7800C Series	
Organization	Standards and Protocol
IETF	RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6 RFC 3973 PIM Dense Mode RFC 4271 A Border Gateway Protocol 4 (BGP 4) RFC 4273 Definitions of Managed Objects for BGP 4 RFC 4360 BGP Extended Communities Attribute RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4486 Subcodes for BGP Cease Notification Message RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4724 Graceful Restart Mechanism for BGP RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4760 Multiprotocol Extensions for BGP 4 RFC 4940 IANA Considerations for OSPF RFC 5065 Autonomous System Confederation for BGP RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6 RFC 5492 Capabilities Advertisement with BGP 4 RFC 6620 FCFS SAVI
IEEE	IEEE 802.1D Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol 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 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control

Typical Applications

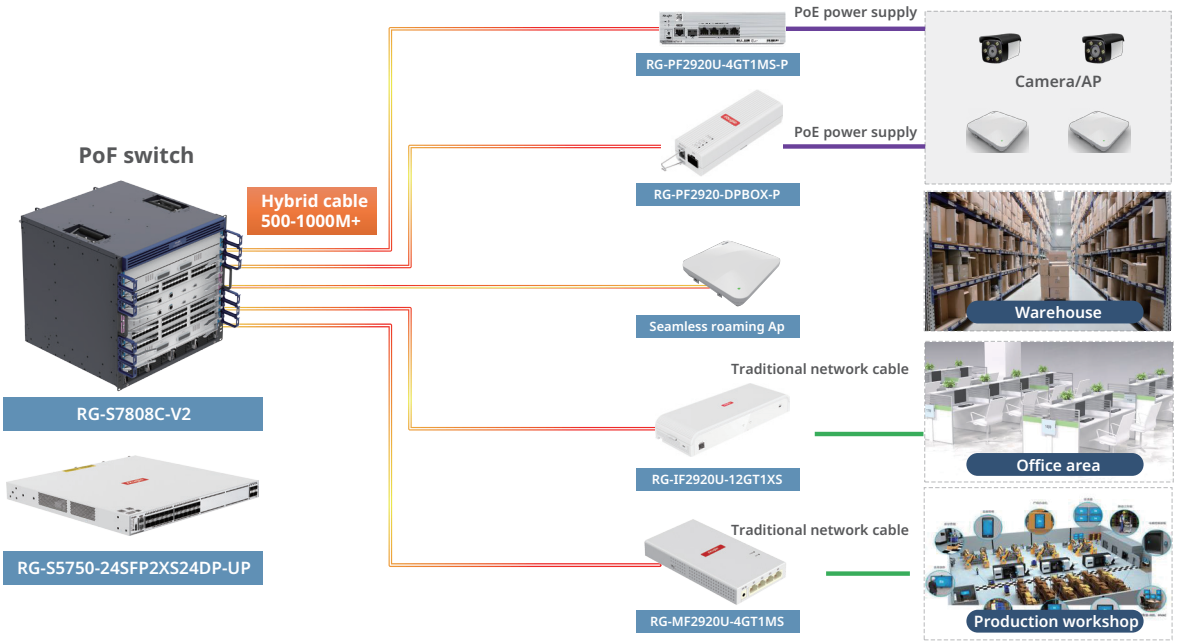
Serving as Core Devices on a Small- or Medium-Sized Network



Serving as Aggregation Devices on a Large-Sized Network



Hybrid Cable Scenario



Ordering Guide

Follow the steps to order the RG-S7800C series switches:

- Select the switch and supervisor module based on the specific product model.
- Select the power module based on power supply requirements. At least one power module must be selected.
- Select the switch fabric module based on service requirements.
- Select the line card based on service requirements. Before ordering a line card, contact the online customer service personnel for the details about the line card.

The item marked with the asterisk (*) in Ordering Information will be available in the future.

Ordering Information

Switches and Supervisor Modules

Model	Description
S7805C	RG-S7805C switch, which can accommodate three line cards and two supervisor modules
S7808C	RG-S7808C switch, which can accommodate six line cards and two supervisor modules
S7810C	RG-S7810C switch, which can accommodate eight service cards, two supervisor modules, and two switch fabric modules

Model	Description
M7805C-CM II	S7805C high-performance 2nd-generation supervisor module (matching EB, D, and F series line cards)
M7808C-CM II	S7808C high-performance 2nd-generation supervisor module(matching EB, D, and F series line cards)
M7810C-CM	S7810C high-performance 1st-generation supervisor module(matching EB and D series line cards)
M7810C-CM-F	S7810C high-performance 2nd-generation supervisor module(matching F series line cards)

Note:
1、Different models cannot be interchanged
2、Mandatory item, 1+1 redundancy supported, and at least one supervisor module must be configured.

Power Modules and Fan Modules

Model	Description
RG-PA300I-F	S7805C power module (AC, 300 W, 10 A)
RG-PA460I-F	S7805C power module (available for redundancy, AC, 460 W, 10 A)
RG-PA600I-F	S7808C power module (available for redundancy, AC, 600 W, 10 A)
RG-PA1600I-F	S7808C power module (available for redundancy, AC, 1600 W, 16 A)
RG-PD600I-F	S7808C power module (available for redundancy, DC, 600 W, –48 V)
RG-PA600I	S7810C power module (available for redundancy, AC, 600 W, 10 A)
RG-PD600I	S7810C power module (available for redundancy, DC, 600 W, 20 A)
RG-PA1600I	S7810C power module (available for redundancy, AC, 1600 W, 16 A)
RG-PD1600I	S7810C power module (available for redundancy, DC, 1400 W, 50 A)
M08-FAN	S7808C fan: Each M08-FAN tray consists of two fan modules and one fan monitoring card. It blows air to the outside for convection. This is a default configuration for the switches.
M7800C-48DP	External power supply card of the RG-S7808C-V2, 48 power output ports per card, and a maximum of 100 W power per port

Switch Fabric Modules

Model	Description
M7810C-FE-D I	RG-S7810C switch fabric module I
M7810C-FE-F I	RG-S7810C 2nd-generation switch fabric module

Line Cards

Model	Description
M7800C-48XS-FB	48 x 10GE optical ports (SFP+ and LC)
M7800C-8CQ-FB	8 x 100G Ethernet optical ports (QSFP28 and LC)
M7800C-48GT-FA	48 x GE electrical ports (RJ45)
M7800C-48SFP-FA	48 x GE optical ports (SFP+ and LC)
M7800C-32XS4QS-DA	32 x 10GE optical ports (SFP+ and LC) + 4 x 40G Ethernet optical ports (QSFP+ and MPO)
M7800C-24GT24SFP4XS-EB	24 × GE electrical ports (RJ45) + 24 x GE optical ports (SFP and LC) + 4 x 10GE optical ports (SFP+ and LC)
M7800C-24SFP/12GT4XS-EB	24 x GE optical ports (SFP and LC) + 12 x GE electrical combo ports (RJ45) + 4 x 10GE optical ports (SFP+ and LC)
M7800C-48GT4XS-EB	48 x GE electrical ports (RJ45) + 4 x 10GE optical ports (SFP+ and LC)
M7800C-48SFP4XS-EB	48 x GE optical ports (SFP and LC) + 4 x 10GE optical ports (SFP+ and LC)

Note:

- EB series line card only interchanged with D series line cards.
- D series line card only interchanged with EB series line cards.
- F series line card cannot be interchanged with other line cards.

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/service_41

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 more information, visit www.ruijienetworks.com or call 86-400-620-8818.