



RG-S6910-3C

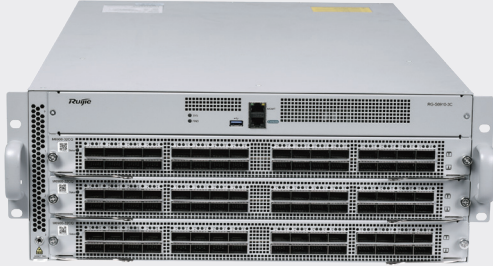
Data Center Switch Datasheet



Scan QR Code
For More Enquiry

Ruijie

Product Pictures



Front View



Rear View



Isometric View

Product Overview

RG-S6910-3C is a new-generation high-performance, high-density fixed switch released by Ruijie Networks. It offers 96×100GbE ports in a space of 4 RU, and can meet the networking requirements of small-, medium-, and large-sized data centers.



| Product Features

Building a Next-Generation Data Center Network

The next-generation data center networks require switches to offer higher performance and bandwidth within unit space. RG-S6910-3C offers a maximum of 96×100GbE ports or 24×400GbE ports in a space of 4 RU and a buffer capacity of 16 GB, to better meet the evolution requirements of next-generation data center networks.

Carrier-Class Reliability Protection

RG-S6910-3C supports 2+2 power redundancy and 5+1 fan redundancy. All power modules and fan modules can be hot-swapped without affecting the normal operation of the device. The switch provides fault detection and alarm functions for power modules and fans. It automatically adjusts the fan speed based on temperature changes, to better adapt to the environment in data centers. The device also supports device-level and link-level reliability protection as well as overcurrent protection, overvoltage protection and overheating protection.

In addition, the product integrates various link reliability mechanisms such as graceful restart (GR), bidirectional forwarding detection (BFD). When multiple services and heavy traffic are carried over the network, these mechanisms can reduce the impact of exceptions on network services and enhance the overall reliability.

IPv4/IPv6 Dual-Stack Protocols and Multilayer Switching

The hardware of RG-S6910-3C supports IPv4 and IPv6 protocol stacks and multilayer line-rate switching. The hardware processes IPv4 and IPv6 packets in a differentiated manner. The switch also integrates multiple tunneling technologies (such as manual tunneling, automatic tunneling, and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunneling). Users can flexibly work out IPv6 inter-network communication solutions by using this switch based on IPv6 network planning and

network conditions.

The device supports numerous IPv4 routing protocols, including static routing, Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Intermediate System to Intermediate System (IS-IS), Border Gateway Protocol version 4 (BGP4). Users can select required routing protocols based on network environments, to flexibly build networks.

The device also supports abundant IPv6 routing protocols, including static routing, Routing Information Protocol next generation (RIPng), OSPFv3, and BGP4+. Appropriate routing protocols can be selected to upgrade an existing network to an IPv6 network or build a new IPv6 network.

Hardware-based Traffic Visualization

The chip hardware enables the switch to visualize the end-to-end traffic of complex networks involving multiple paths and nodes. Then, users can focus on monitoring the forwarding path and delay of each session, raising the troubleshooting efficiency by more than ten times.

All-Round Management Performance

The switch provides various management interfaces such as the console interface, management interface, and USB interface, and supports Simple Network Management Protocol (SNMP) v1/v2c/v3, Google remote procedure call (gRPC), and universal network management platform. CLI-based management, telnet, and cluster management supported by the device, which facilitates device management. The supported encryption modes such as SSH2.0 and SSL ensures more secure management.

In addition, the device supports the switched port analyzer (SPAN), remote SPAN (RSPAN), and encapsulated remote SPAN (ERSPAN). It can analyze network traffic, take proper management and maintenance measures accordingly, and clearly present the network service traffic. Multiple network traffic analysis reports generated by the device can provide a basis for users to optimize the network structure and adjust resource deployment timely.

Technical Specifications

Hardware Specifications

System Specifications

System Specifications	RG-S6910-3C
Ports	100GbE/400GbE ports
Slots	4
Expansion Module Slots	Three expansion slots, each slot supporting the line card with 32 x 100GbE ports or 8 x 400GbE ports
Expansion module	Four power module slots Six fan module slots
Management Port	One management port, one console port, and one USB port
Switching Capacity	19.2 Tbps
Packet Forwarding Rate	4000 Mpps
802.1Q VLAN	4094

Dimensions and Weight

Dimensions and Weight	RG-S6910-3C
Dimensions (W × D × H)	442 mm x 735 mm × 173.6 mm (17.40 in. x 28.94 in. x 6.83 in., 4 RU)
Weight	About 42 kg (92.59 lbs., including four power modules, six fans, and three subcard modules)

Power Supply and Consumption

Power Supply and Consumption	RG-S6910-3C
AC	- Rated voltage: 110 V AC/ 220 V AC - Rated voltage range: 100 V AC to 240 V AC, 50 Hz to 60 Hz - Max voltage range: 90 V AC to 264 V AC, 47 Hz to 63 Hz
High-voltage DC	Input voltage range: 180 V DC to 300 V DC
Maximum Power Consumption	- Max: 2046 W - Typical: 1092 W - Static: 760 W

Environment and Reliability

Environment and Reliability	RG-S6910-3C
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	10% RH to 90% RH (non-condensing)
Storage humidity	5% to 95% RH (non-condensing)
Working altitude	Operating altitude: up to 5000 m (16,404.20 ft.) Storage altitude: up to 5000 m (16,404.20 ft.)

Software Specifications

Software Specifications	RG-S6910-3C
Device virtualization	Docker gRPC APIs in Docker
L2 Protocols	IEEE 802.3ae (10GBase), IEEE 802.3ak, IEEE 802.3an, IEEE 802.3x, IEEE 802.3ad (link aggregation), IEEE 802.1p, IEEE 802.1Q, IEEE 802.1D (STP), IEEE 802.1w (RSTP), IEEE 802.1s (MSTP), IGMP Snooping, Jumbo Frame (9 KB), IEEE 802.1ad (QinQ), GVRP
L3 Protocols (IPv4)	BGP4, OSPFv2, RIPv1, RIPv2, MBGP, LPM Routing, Policy-based Routing, Route-policy, ECMP, WCMP, VRRP, IGMP v1/v2/v3, PIM-SSM/SM/DM, MSDP, Any-RP
IPv6 Basic Protocols	Neighbor Discovery, ICMPv6, Path MTU Discovery, DNSv6, DHCPv6, ICMPv6, ICMPv6 redirection, ACLv6, TCP/UDP for IPv6, SNMP v6, Ping/Traceroute v6, IPv6 RADIUS, Telnet/SSH v6, FTP/TFTP v6, NTP v6, IPv6 MIB support for SNMP, VRRP for IPv6, IPv6 QoS
IPv6 Features	Static routing, ECMP, PBR, OSPFv3, RIPng, BGP4+, MLDv1/v2, PIM-SMv6, manual tunneling, IPv4 over IPv6 tunneling
Visualization	gRPC sFLOW and IPFIX
Multicast	IGMP Proxy, IGMP v1, v2, v3, IGMP Host Behavior, Querier Election, Member Query and Response, Static Multicast Route, IGMP Fast Leave, IGMP Filter, Layer-2 Multicast Forwarding Without Packet Loss, IGMPv1 and IGMPv2 Snooping, IVGL Mode, Querier, Source IP Address Check, Source Port Check, MLD Proxy, MLD v1 and v2, MLD Snooping, Coping with Traffic Burst Without Packet Loss, Layer-2 Multicast Forwarding Without Packet Loss, Source Port Check, MSDP, PIM-DM, PIM-SMv6, PIM-SSMv6, PIM-SM, PIM-SSM

Software Specifications	RG-S6910-3C
ACL	ACL 80, Dual-stack Networking, ACL-based Redirection, IPv6 ACL, Standard IP-based ACL, Extended IP-based ACL, Extended MAC-based ACL, Ingress/Egress ACLs, Time-based ACL, Global ACL, ACL Counter, ACL Logging, ACL Re-marking, Displaying ACL Resource Usage, Expert-level ACL
QoS	Mapping of 802.1p, DSCP, and ToS priorities, ACL-based traffic classification, priority marking/remarking, multiple queue scheduling mechanisms available including SP, WFQ, and SP+WRR
Data center features	The MMU queue ID ranges from 0 to 7. Buffer Occupation/Queue Traffic Statistics/Packet Loss Report Through gRPC Flow Suspension Prevention MMU Displaying Lost Packets and Alarms Due to Buffer Congestion on an Interface Real-Time Buffer Monitoring Reading Statistics of Unicast Packet Loss Due to Buffer Congestion Through MIB
HA Design	GR for RIP/OSPF/BGP, BFD, REUP dual-link fast switching and RLDP unidirectional link detection, 1+1 power redundancy and fan redundancy, and hot swap for all cards and power modules
Security Features	Network foundation protection policy, CPP, DDoS attack defense, illegitimate packet detection, data encryption, source IP spoofing prevention, IP scanning prevention, RADIUS/TACACS, IPv4/v6 packet filtering by basic ACL, extended ACL or VLAN-based ACL, plaintext-based and MD5 ciphertext-based authentication for OSPF, RIPv2, and BGPv4 packets, telnet login and password mechanisms for restricted IP addresses, uRPF, broadcast packet suppression
Management Mode	SNMP v1/v2c/v3, telnet, console, MGMT, RMON, SSHv1/v2, FTP/TFTP, NTP, syslog, and SPAN/RSPAN/ERSPAN
Other Protocols	DHCP Client, DHCP Relay, DHCP Server, DNS Client, UDP relay, ARP Proxy, and Syslog

Safety and Regulatory Compliance

Specification	RG-S6910-3C
Safety	• UL 62368-1 • CSA C22.2 No. 62368-1 • IEC 62368-1 • EN 62368-1 • BS EN 62368-1 • GB 4943.1
Electromagnetic Compatibility (EMC)	• EN 55032 • EN 55035 • EN 61000-3-2 • EN 61000-3-3 • BS EN55032 • BS EN 55035 • BS EN 61000-3-2 • BS EN61000-3-3 • EN 300 386 • ANSI C63.4 • 47 CFR FCC Part 15 Subpart B • ICES-003 Issue 7 • GB/T 9254.1
Environment	• 2011/65/EU EN 50581 • 2012/19/EU EN 50419 • (EC) No.1907/2006 • GB/T 26572

*For more country-specific regulatory information and approvals, contact your local sales agency.

Ordering Information

Chassis, Expansion Cards, Fan Modules, and Power Modules

Model	Description
RG-S6910-3C	Three expansion slot, four power module slots, and six fan module slots The power module model is RG-PA1200I-F and the fan model is M2EFAN I-F.
M6900-32CQ	32-port 100GbE card
RG-PA1200I-F	RG-S6910-3C power module, supporting 2+2 redundancy, hot swapping, and front-to-rear ventilation design

Model	Description
M2EFAN I-F	RG-S6910-3C fan module, supporting 5+1 redundancy, hot swapping, and front-to-rear ventilation design

100GBASE Series Optical Modules

Product Model	Description
100G-QSFP-SR-MM850	100G SR module, QSFP28 form factor, MPO, 850 nm, 100 m (328.08 ft.) over MMF
100G-QSFP-iLR4-SM1310	100G iLR4 module, QSFP28 form factor, Duplex LC, 1310 nm, 2 km (6,561.68 ft.) over SMF
100G-QSFP-LR4-SM1310	100G LR4 module, QSFP28 form factor, Duplex LC, 1310 nm, 10 km (32,808.40 ft.) over SMF
100G-QSFP-ER4-SM1310	100G ER4 module, QSFP28 form factor, Duplex LC, 1310 nm, 40 km (131,233.59 ft.) over SMF
100G-AOC-5M	100G QSFP28 AOC cable, 5 m (16.40 ft.)
100G-AOC-10M	100G QSFP28 AOC cable, 10 m (32.81 ft.)

40GBASE Series Optical Modules

Product Model	Description
40G-QSFP-iLR4-SM1310	40G iLR4 module, QSFP+ form factor, Duplex LC, 2 km (6,561.68 ft.) over SMF
40G-QSFP-LR4-SM1310	40G LR4 module, QSFP+ form factor, Duplex LC, 10 km (32,808.40 ft.) over SMF
40G-QSFP-LSR-MM850	40G LSR module, QSFP+ form factor, MPO, 400 m (1,312.34 ft.) over MMF
40G-QSFP-SR-MM850	40G SR module, QSFP+ form factor, MPO, 150 m (492.13 ft.) over MMF
40G-QSFP-LX4-SM1310	40G LX4 module, QSFP+ form factor, Duplex LC connector, 150 m (492.13 ft.) over OM3/OM4 MMF, or 2 km (6,561.68 ft.) over SMF
40G-AOC-30M	40G QSFP+ AOC cable, 30 m (98.43 ft.)
40G-AOC-5M	40G QSFP+ AOC cable, 5 m (16.40 ft.)

| 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-Summary/>

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.