



RG-S6930-2C

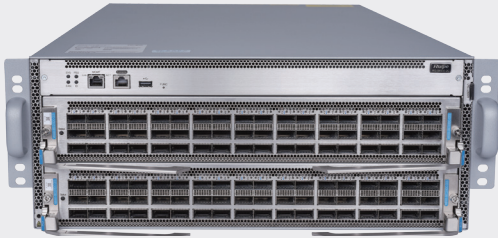
Next-Generation Data Center and Cloud Computing Core Switch



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| Product Pictures



RG-S6930-2C



M6900-36CQ18DC-CES Line Card



M6900-72CQ-CES Line Card

| Product Overview

The RG-S6930-2C switch is a next-generation high-density 100GE/200GE DCI switch, featuring 200GE/100GE access, large buffer, and comprehensive data center features.

An RG-S6930-2C switch provides up to 144 x 100GE ports or 72 x 200GE ports, making it an ideal choice for data center gateway, MAN, and DCI scenarios.



| Product Features

Building Next-Generation Data Center Networks

Data Centers with Operable and Maintainable Traffic

To help customers set up data centers with operable and maintainable traffic, the RG-S6930-2C switch supports high-precision traffic collection, enhanced Encapsulated Remote Switched Port Analyzer (ERSPAN), Telemetry, and alarming for silent packet drop.

DCI

The RG-S6930-2C switch has a large buffer, maintains millions of routing entries, helping customers to set up a MAN or DCI network with a low cost. The switch also supports the MACSec feature, which improves data transmission security.

Fast Fault Detection

With BGP support for BFD, the RG-S6930-2C switch can perform fast fault detection and traffic switchover, reducing traffic loss. The core and SDK allow non-disruptive fault recovery, minimizing the service interruption time.

Carrier-Class High Reliability

The RG-S6930-2C switch supports 2+2 power redundancy and 7+1 fan redundancy. All power modules and fan modules can be hot-swapped without affecting service continuity on the switch. The switch provides fault detection and alarm functions for power modules and fan modules, and can automatically adjust fan speed based on ambient temperature to adapt to environment changes in data centers. The switch also supports device-level and link-level reliability protection as well as overcurrent protection, overvoltage protection, and over temperature protection.

In addition, the switch integrates various link reliability mechanisms such as graceful restart (GR) and 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 the RG-S6930-2C switch supports IPv4 and IPv6 protocol stacks and multilayer line-rate switching. It is capable of distinguishing IPv4 and IPv6 packets and supports multiple tunneling technologies (such as manually configured tunnels), providing flexible communication solutions based on IPv6 network planning and the current network environment.

The RG-S6930-2C switch supports various IPv4 routing protocols, including static routing, Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Intermediate System to Intermediate System (IS-IS), and Border Gateway Protocol version 4 (BGP4). Users can select routing protocols based on network environments to flexibly set up an IPv4 network.

The RG-S6930-2C switch also supports abundant IPv6 routing protocols, including static routing, Routing Information Protocol next generation (RIPng), OSPFv3, IS-ISv6, and BGP4+. Users can select routing protocols to upgrade an existing network to an IPv6 network or build a new IPv6 network.

All-Round Management Performance

The switch provides various management ports such as the Console port, management port, and USB port, and supports Simple Network Management Protocol (SNMP) v1/v2c/v3 and universal network management platform. It supports CLI-based management, Telnet, and cluster management, which facilitates switch management. The supported encryption modes such as SSH2.0 and SSL enhance management security. In addition, the switch supports the switched port analyzer (SPAN), remote switched port analyzer (RSPAN), and multiple SPAN monitoring ports, making network traffic monitoring intuitive. The switch provides various network traffic analysis reports to help you promptly optimize the network architecture and schedule resources.

MACSec for Hardware-Level Data Encryption

provides users with MAC-layer data encryption, data frame integrity check, and data source authenticity check to ensure security.

The RG-S6930-2C switch supports MACSec, which

Product Specifications

Hardware Specifications

Item	RG-S6930-2C
Dimensions (W × D × H)	442 mm x 760 mm x 175 mm (17.40 in. x 29.92 in. x 6.89 in.)
Rack height	4 RU
Unit weight	23.4 kg (51.59 lbs., empty chassis) 33.6 kg (74.08 lbs., a chassis with four power modules and eight fan modules)
Switching capacity	28.8 Tbps
Packet forwarding rate	5400 Mpps
Management port	1 x RJ45 console port 1 x RJ45 MGMT port
USB port	1 x USB 2.0 port (Type A connector)
Module slot	2 x expansion module slots 4 x power module slots 8 x fan module slots
Power consumption	Maximum power consumption: 2934 W Typical power consumption: 1338 W Static power consumption: 600 W
Power input	RG-PA1600II-F (AC input): Rated input voltage: 100 V AC to 127 V AC, 200 V AC to 240 V AC, 50 Hz/60 Hz Maximum input voltage: 90 V AC to 140 V AC, 180 V AC to 264 V AC, 47 Hz to 63 Hz Rated input current: 12 A (100 V to 127 V AC) 9.5 A (200 V AC to 240 V AC) Power port type: C14 RG-PA1600II-F (HVDC input): Rated input voltage: 240 V DC Maximum input voltage: 180 V DC to 300 V DC Rated input current: 9.5 A Power port type: C14

Item	RG-S6930-2C
Temperature	Operating temperature: 0°C to 40°C (32°F to 104°F) Storage temperature: -40°C to +70°C (-40°F to +158°F) Note: At altitudes ranging from 1800 m (5,905.51 ft.) to 5000 m (16,404.20 ft.), the maximum temperature decreases by 1°C (1.8°F) for every 200 m (656.17 ft.) increase in elevation.
Humidity	Operating humidity: 10% RH to 90% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)
Altitude	Operating altitude: ≤ 5,000 m (16,404.20 ft.) Storage altitude: ≤ 5000 m (16,404.20 ft.)
Cooling	Air cooling, front-to-rear airflow (port-side intake)

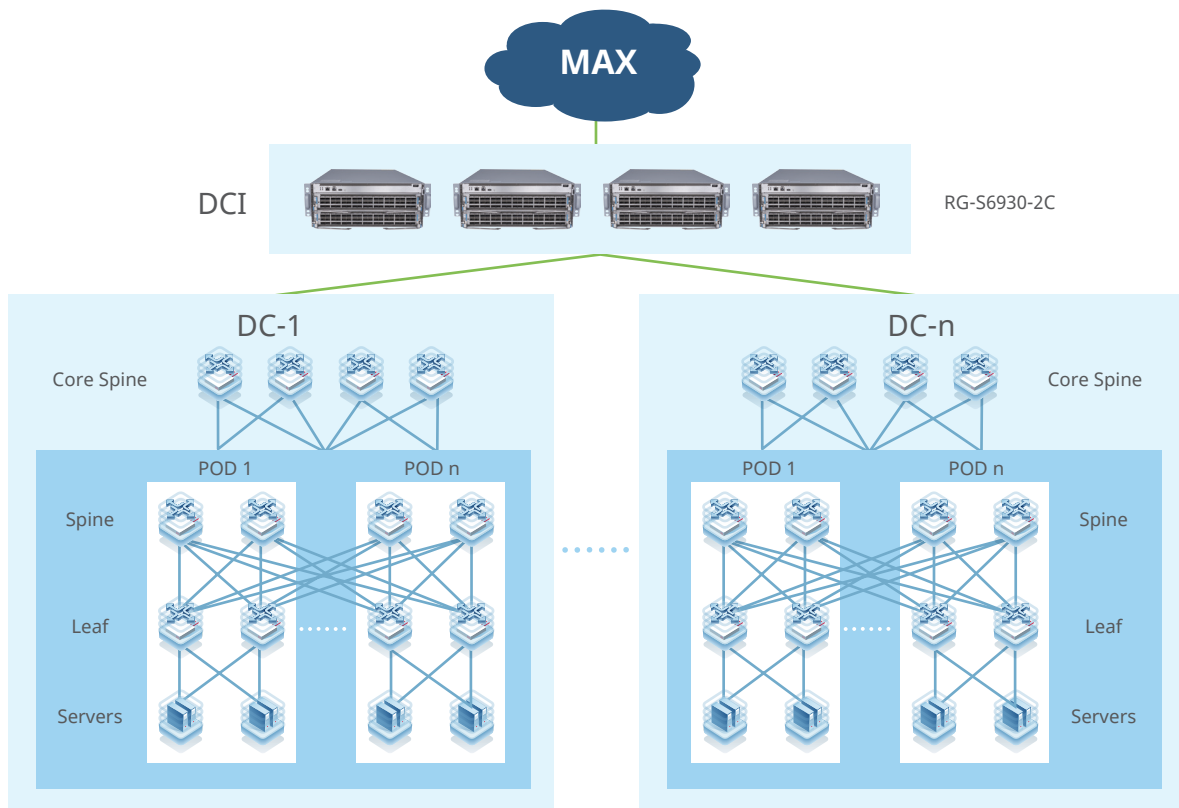
Software Specification

Item	RG-S6930-2C
802.1Q VLAN	4094
Layer 2 Protocols	IEEE802.3ad (Link Aggregation Control Protocol), IEEE802.1p, IEEE802.1Q, IEEE802.1D (STP), IEEE802.1w (RSTP), IEEE802.1s (MSTP), IGMP Snooping, MLD Snooping, Jumbo Frame (9 KB), IEEE802.1ad (basic QinQ and *selective QinQ), and GVRP
Layer 3 Protocols (IPv4)	BGP4, OSPFv2, IS-IS, RIPv1, RIPv2, MBGP, LPM Routing, Policy-based Routing, Routing Policy, ECMP, WCMP, VRRP, IGMP v1/v2/v3, PIM-SSM/SM/DM, MSDP, and Any-RP
Basic IPv6 Protocols	Neighbor Discovery, 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, and IPv6 QoS
IPv6 Features	Static routing, ECMP, PBR, BGP4+, OSPFv3, IS-ISv6, RIPng, MLDv1/v2, PIM-SMv6, manual tunnel, *automatic tunnel, IPv4 over IPv6 tunnel, and *ISATAP tunnel
Visualization	gRPC sFlow and IPFIX sampling
QoS	802.1p, DSCP, and ToS priority mapping ACL-based traffic classification Priority marking and remarking Queue scheduling mechanisms, including SP, WFQ, and SP+WFQ
HA Design	GR for RIP/OSPF/BGP, BFD, REUP dual-link fast switching, RLDP unidirectional link detection, 2+2 power redundancy, fan redundancy, and hot swapping for all line cards and power supply modules

Item	RG-S6930-2C
Security Features	MACSec, Network foundation protection policy (NFPP), CPU Protection Policy (CPP), DDoS attack defense, unauthorized data packet detection, 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 authentication for OSPF, RIPv2, and BGPv4 packets, uRPF, broadcast packet suppression, Telnet login and password mechanisms for restricted IP addresses
Management Modes	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

Typical Applications

Ultra-Large DCI



Ordering Guide

Take the following steps to configure an RG-S6930-2C switch:

- Select an RG-S6930-2C chassis fully equipped with power and fan modules.
- Select one or two line cards based on service requirements.

Ordering Information

Chassis and Supervisor Engine

Model	Description
RG-S6930-2C	RG-S6930-2C chassis equipped with four RG-PA1600II-F power supply modules and eight M2EFAN II-F fan modules Two expansion slots, four power supply module slots, and eight fan module slots

Power Supply Modules

Model	Description
RG-PA1600II-F	1600 W power supply module (AC and 240 V HVDC)

Fan Modules

Model	Description
M2EFAN II-F	Fan module (port-side intake)

Line Cards

Model	Description
M6900-36CQ18DC-CES	36 x 100GE QSFP28 ports and 18 x 200GE QSFP56 ports
M6900-72CQ-CES	72 x 100GE QSFP28 ports

40GE Optical Transceivers

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

100GE Optical Transceivers

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

200GE Series Optical Transceivers

Model	Description
200G-Q56-SR4-MM850	200G SR4 optical transceiver, QSFP56 form factor, MPO-12 connector, 100 m (328.08 ft.) over OM4 MMF

| Warranty

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

- Warranty terms: <https://www.ruijie.com/support/servicepolicy>
- Warranty period: <https://www.ruijie.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.ruijie.com/>
- Online support: <https://www.ruijie.com/support>
- Hotline support: <https://www.ruijie.com/support/hotline>
- Email support: service_rj@ruijie.com



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