



RA-S6930-64QC 400GbE Data Center Switch

OVERVIEW

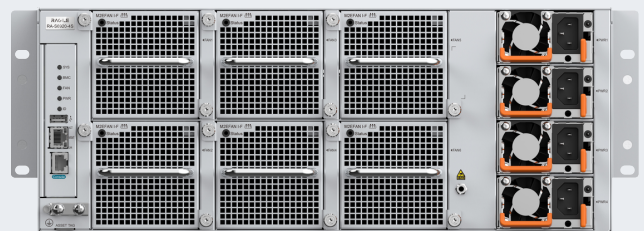
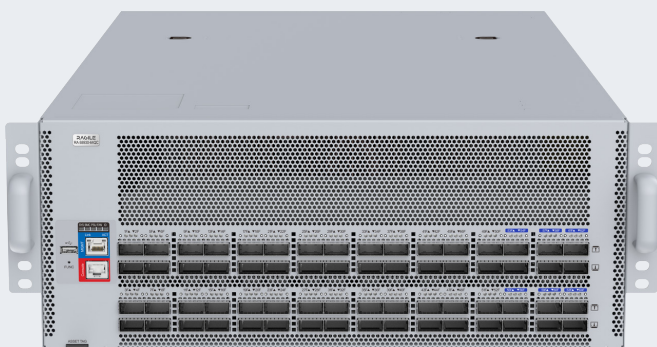
The RA-S6930-64QC is a high-performance and high-density 400GbE core switch of Ragile Networks.

Designed based on a single 25.6T chip, the RA-S6930-64QC switch provides up to 64 x 400GbE physical ports in a space of 4 RU, which can be deployed at the spine layer to establish hyperscale high-bandwidth and low-latency 100GbE data centers. It also supports construction of lossless networks and can be applied to service scenarios that require lossless transmission, such as AI training or HPC.

Used with the 400GbE ZR/ZR+ module, the RA-S6930-64QC switch can support interconnection over a distance of at least 80 km and deployment on a DCI network, reducing investment in intermediate transmission equipment.

MANAGED BY HULKOS™

The HULKOS embedded operating system (OS) is independently developed by Ragile for various network communication devices. This OS is fully modularized and designed for network security operation and management that supports multiple platforms. It supports various network products of Ragile, from switches, router products to wireless Wi-Fi and AP products, to ensure consistent production operation and management styles and functions.



PRODUCT HIGHLIGHTS

High-Density 400GbE Ports

- Provides 64 x 400GbE ports within a space of 4 RU.

RDMA-based Lossless Ethernet

- Supports the RDMA feature and enables the establishment of lossless, low-latency data center Ethernet.

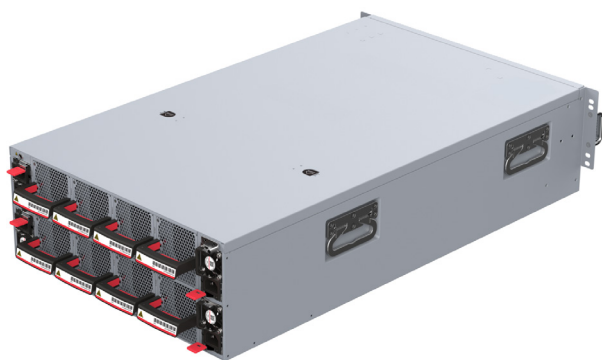
80 km + Long-Distance Interconnection

- Supports the 400GbE ZR/ZR+ module for interconnection over a distance of at least 80km.

Automated O&M/Monitoring Network

- Enables active pushing of switch status based on gRPC.
- Supports the ZTP protocol to meet automatic deployment requirements.

SOFTWARE FEATURES



L2 Protocols

- 802.1D Spanning Tree Protocol (STP)
- 802.1w Rapid Spanning Tree Protocol (RSTP)
- 802.1s Multiple Spanning Tree Protocol (MSTP)
- 802.3ad Link Aggregation Control Protocol (LACP)
- 802.1Q VLAN Tagging
- Jumbo Frames (9216 bytes)

L3 Protocols

- Routing protocols: OSPF, BGP, MBGP, IS-IS, and RIPv1/v2
- 128 equal-cost multi-path (ECMP) routes
- Weighted cost multi-path (WCMP) routes
- VRF
- VRRP
- Policy-based routing (PBR)
- Route map

IPv6

- Routing protocols: OSPFv3, BGP4+, IS-ISv6, and RIPng
- Neighbor Discovery (ND)

- Path MTU Discovery (PMTUD)
- ICMPv6, DHCPv6, DNSv6, SNMP v6, TCP/UDP for IPv6
- IPv6 RADIUS
- ACLv6, IPv6 QoS
- Telnet/SSH v6
- FTP/TFTP v6
- NTP v6
- Ping/Traceroute v6
- VRRP for IPv6
- IPv6 MIB support for SNMP

Data Center Features

- RDMA feature: PFC/ECN

Visualization

- gRPC
- sFlow

QoS

- Up to eight unicast queues and 4 multicast queues for each port
- EXP priority mapping including 802.1p, DSCP, and ToS
- ACL-based traffic classification
- Priority marking/remarking
- Multiple queue scheduling mechanisms: SP/WRR/DRRWFQ/SP + WRR/SP + DRR/SP + WFQ
- WRED
- Congestion avoidance mechanisms, such as tail discarding

HA Design

- GR for RIP/OSPF/BGP
- BFD
- DLDP
- Dual-link fast switching (REUP)
- Unidirectional link detection (RLDP)

Security Features

Network Foundation Protection Policy (NFPP)
CPU Protection Policy (CPP)
RADIUS
TACACS
Plaintext-based and MD5 ciphertext-based authentication for OSPF, RIPv2, and BGPv4 packets
IPv4/v6 packet filtering by standard ACL, extended ACL and VLAN-based ACL

Management Mode

SNMP v1/v2/v3
Telnet, SSHv1/v2
Console
MGMT
RMON
FTP/TFTP
NTP clock
Syslog
SPAN/RSPAN/ERSPAN
ZTP
NETCONF
Configuration Rollback

SPECIFICATIONS

System Specifications	RA-S6930-64QC
Port Form	Fixed 64 x 400GbE ports (QSFP-DD)
Number of Expansion Slots	Not supported
Expansion Module	M2EFAN II-F × 8 PA1300I-F × 4
Management Port	One MGMT port, one console port, and one USB port, compliant with the USB2.0 standard
Switching Capacity	51.2 Tbps
Packet Forwarding Rate	10300 Mpps
802.1Q VLAN	4K
Dimensions and Weight	
Dimensions (W x D x H)	442 mm x 735 mm x 173.6 mm, 4RU
Weight	About 48 kg (including eight fan modules and four power modules)

POWER SUPPLY SPECIFICATIONS

Power Supply and Consumption	RA-S6930-64QC
AC	Rated voltage range: 100 - 240 VAC Maximum voltage range: 90 - 264 VAC Frequency: 50-60 Hz
High-voltage DC	Input voltage range: 180 - 300 VDC Rated input voltage: 240 VDC
Maximum Power Consumption	<2524W

STANDARD COMPLIANCE

EMC Standards	FCC CFR Title 47, Part 15, Subpart B, ICES-003 Issue 7: October 2020 ANSI C63.4-2014
Safety Standards	IEC 62368-1:2014
Certifications	FCC; IC; cTUVus

ENVIRONMENTAL REQUIREMENTS

Environment and Reliability	RA-S6930-64QC
Operating Temperature	0°C to 40°C
Operating Humidity (Non-condensing)	10% to 90% RH(Non-condensing)

ORDER INFORMATION

Switch, Fan, and Power Supply

Model	Description
RA-S6930-64QC	Fixed 64 x 40GbE ports, 4 power module slots, and 8 fan slots
PA1300I-F	Power module, supporting 2+2 redundancy, hot swapping, and front-to-rear ventilation design
M2EFAN II-F	Fan module, supporting 7+1 redundancy, hot swapping, and front-to-rear ventilation design

WARRANTY POLICY

Ragile Networks Warranty and Support Summary

Warranty and support included with your product purchase from Ragile Networks for all previous warranty information

Definition of the Warranty Term

Products	Hardware Support			support (OS / Firmware)	Remote Technical Support	
	Warranty Period	RMA/DOA - Return for Repair (RFR)*	Advance Hardware Replacement (AHR)**	Software Updates	TAC Support (7x14 Online)	Online Self-Services Support
RA-S6930-64QC	1 Year	9x5x15CD-Ship		√	√	√

RAGILE SERVICE

Ragile will continue to iterate the HULKOS system through continuous technical innovation. HULKOS will continuously provide customers with quality services and more application values based on its technical advantages in terms of stability, security, and openness.

Device maintenance service

- 9x5x15CD-S Basic RFR Service
- 9x5xNBD Standard AHR Service
- 24x7x4 Golden AHR Service
- 9x5xNBD Standard Onsite Service
- 24x7x4 Golden Onsite Service

System integration service

- Hardware Installation Service
- Software & Network Configuration Service

Value-added service

- Critical Moment Onsite Support
- Man-day Service

MORE INFORMATION

Phone: +1(669)666-7653 Email: info@ragilenetworks.com

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For more information about the Ragile RA-S6930-64QC switch, please visit

<http://www.ragilenetworks.com> or contact your local Ragile sales representative.