

RA-B6920-4S 100GbE Data Center Switch

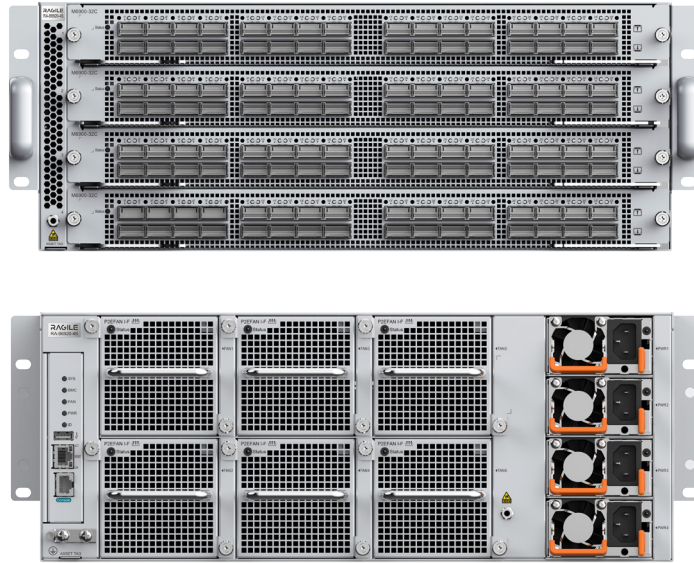


RAGILE

www.ragilenetworks.com

OVERVIEW

The Ragile RA-B6920-4S data center switch offers 128-port 100GbE interface in 4RU chassis, which delivers the highest performance combined with complete L2 and L3 forwarding feature in modern large-scale datacenter networks. RA-B6920-4S based on Broadcom BCM56980 (Tomahawk 3) 12.8Tb/s switch ASIC with maximum port density while consuming minimum power and latency. The RA-B6920-4S switch support latency as low as 700ns in cut-through mode, and a 64 MB packet buffer with a large shared pool allowing for superior burst absorption compared to systems with fixed port buffering. RA-B6920-4S support industry standard 100G optics and cables. All ports allow a choice of speeds including 100GbE or 40GbE, up to 128 interfaces.



PRODUCT HIGHLIGHTS

First-class Performance

- 128 × QSFP28 100GbE Ports
- Highest density 100GbE in compact 4RU
- Up to 25.6 Tbps full duplex
- Up to 8 Bpps
- Wire speed L2 and L3 forwarding
- Latency from 700ns

Resilient Configuration

- Broadcom BCM56980 (Tomahawk 3)
- Intel Xeon D-1527 Processor (Formerly Broadwell DE)
- 8GB DRAM
- System storage \geq 240GB

Data Center Optimized Design

- Typical power of under 5W per port

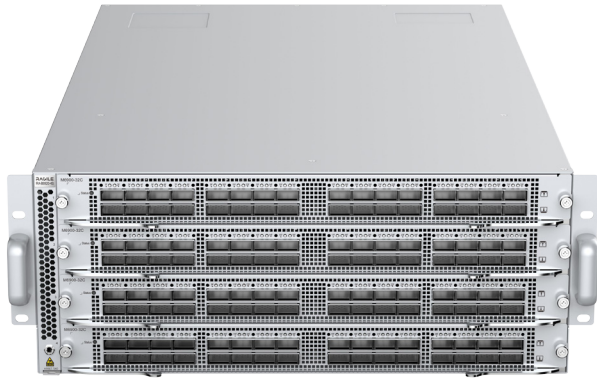
- Over 94% efficient power supplies
- 2+2 redundant & hot-swappable power supplies
- 5+1 redundant & hot-swappable fans
- Front-to-rear cooling
- Tool-less maintenance and simple installation

Cloud Networking Ready

- 128-way ECMP for hyper-scale networks
- Dynamic Load Balancing for advanced multi-pathing
- Shared 64MB Buffer with burst absorption
- Up to 72K MAC and 80K Host entries
- Over 480K IPv4 Routes
- Over 300K IPv6 Routes

*Above is the maximum capacity that the switching chip can provide.

SOFTWARE FEATURES



OS Compatibility

- Loaded with Open Network Install Environment (ONIE) software installer and OpenBMC.
- Compatible with SONiC (Software for Open Networking in the Cloud).

Layer 2 Features

802.3ad LACP
Storm suppression
SPAN
*ERSPAN
Mac address
Monitor-link
Interface traffic statistics
Carrier Delay
Port status detection
802.1ab LLDP
802.1q VLAN
Jumbo Frame (9Kbytes)

Layer 3 Features

ARP to host routing
ARP linkage with MAC for layer 2 port switching
IP conflict detection
Aging of ARP entries
Support to open local ARP proxy based on interface
Support to set the three-layer MAC address on VLAN interface
Send gratuitous ARP
ARP entry aging detection
*ND to host routing
*ND to network segment routing
Support IPv4 ECMP32
Support IPv6 ECMP32
Border Gateway Protocol (BGP) (v4, v6)
iBGP
eBGP
Route Reflector

Route Policies
IPv4 Static Routing
IPv6 Static Routing
Load Balance based on LAG/ECMP

ACL & QoS

* L2 ACL
L3 ACL
Control plane ACL
L3 IPv6 ACL
Interface ACL
Global ACL
Queue traffic statistics
SP
WRR
DRR
*WFQ
*SP+WFQ
SP+WRR
SP+DRR
Incoming flow rate limit
Outgoing flow rate limit
DSCP remarking

Security Features

COPP
*NFPP
SSH
AAA
TACACS+

Application Protocol Features

DHCP relay
*DHCPv6 relay
FTP
SFTP

Management Features

SNMP Version (V1, V2c, V3)
SNMP Trap
Syslog
ZTP
NTP
Management VRF
*GRPC
*NETCONF
*SFLOW
*IPFIX
*INT
*MOD

* Future features

SPECIFICATIONS

Switch Model	RA-B6920-4S
Ports	128 × QSFP28
Max 100GbE Ports	128
Max 40GbE Ports	128
Throughput (full duplex)	25.6 Tbps
Packets/Second	8 Bpps
Latency	700ns
CPU	Intel Xeon D-1527
System Memory	8GB (Up to 32GB)
System Storage	≥240GB
BMC Option	Yes
Switch ASIC	Broadcom BCM56980 (Tomahawk 3)
Packet Buffer Memory	64MB (Dynamic Buffer Allocation)
10/100/1000 MGMT Ports	1
RS-232 Serial Ports	1 (RJ-45)
USB Ports	1
Hot-swap Power Supplies	4 (2+2 redundant)
Hot-swappable Fans	6 (5+1 redundant)
Airflow	Front to rear
Max Power Draw	< 2400W
Max Heat Dissipation Size(W×H×D)	< 8191.2 BTU/hr 17.4 × 6.83 × 28.9 in. (442 × 173.5 × 735mm)
Weight	95.9 pounds (43.5kg)
Power Supplies	1300W AC & HVDC

POWER SUPPLY SPECIFICATIONS

Power Supply	1300W
Input Voltage	100-240V AC 180-310V DC
Typical Input Current	12-7A (AC) 6A (DC)
Input Frequency (AC)	50-60Hz
Input Connector	IEC 320-C13
Efficiency (Typical)	94% Platinum

ORDER INFORMATION

Model	Description
RA-B6920-4S	4 slots for line card and max 128 × 100GbE QSFP28 ports 4 slots for power supply modules. 6 slots for fan modules. 4 power supply modules and 6 fan modules already included.
M6900-32C	32 × 100GbE line card
P2EFAN I-F	Fan module for, front-to-rear airflow. With up to 6 fan modules, support 5+1 redundancy.
PA1300I-F	AC power supply module, front-to-rear airflow. With up to 4 power modules, support 2+2 redundancy.

NOTE:

The Ragile RA-B6920-4S is a white box switch hardware system with basic SONiC OS. Software and other services need to be purchased separately.

MORE INFORMATION

Phone: +1-408-772-9724 Email: info@ragilenetworks.com

Address: 35649 Embassy Common, Fremont, CA

For more information about the Ragile RA-B6920-4S switch, please visit

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

STANDARD COMPLIANCE

EMC	Emissions: FCC part15 Subpart B, EN55032, EN61000-3-2, EN61000-3-3 or EN61000-3-11, EN61000-3-12 (as applicable) Immunity: EN55035 Emissions and Immunity: EN300386
Safety	UL/CSA 62368-1, EN 62368-1, IEC 62368-1 CB Scheme with all country differences
Certifications	North America (NRTL) European Union (EU) BSMI (Taiwan) C-Tick (Australia) CCC (PRC) MSIP (Korea) EAC (Customs Union) VCCI (Japan)
European Union Directives	2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 2011/65/EU RoHS Directive

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	32 to 104° F (0 to 40°C)
Storage Temperature	-40 to 158° F (-40 to 70°C)
Relative Humidity (Operating)	10 to 90% non-condensing
Altitude (Operating)	-1640ft to 9843ft
Altitude (Non-operating)	-1640ft to 13123ft

