RAGILE

Ragile company introduction

Open Networking With Vision and Precision

Contents

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Who We Are to You

Your navigator and helmsman in open network world

- ## An experienced Open Network solution expert
  Offers most suitable solutions that help you quickly build open network

- ## A California-born, globalized Open Network Builder

Provides reliable products and prompt service through global supply chain and sites

Headquartered in Bay Area

R&D team with more than 20 years' experience

Global supply chain and manufacturing

Ragile Networks INC.

Building Open Network
with Vision and Precision

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Building Next-Generation Open Network

The Pioneer on New Brite Box Switches

Harnessing the open data center network trends

– Actively participate in communities like OCP, SONiC, COBO, Open19, ONF etc.

– Carrying forward the continuous evolution of open network, including:

- Architecture evolution: from 25G/50G/100G to 200G/400G/800G

- SerDes evolution: from 28G/56G to 112G

- Silicon optical evolution: COBO/CPO

Providing networking solutions For cloud native / bare metal cloud:

– Hyper-scaling and high performance CLOS network based on brite box+SONiC

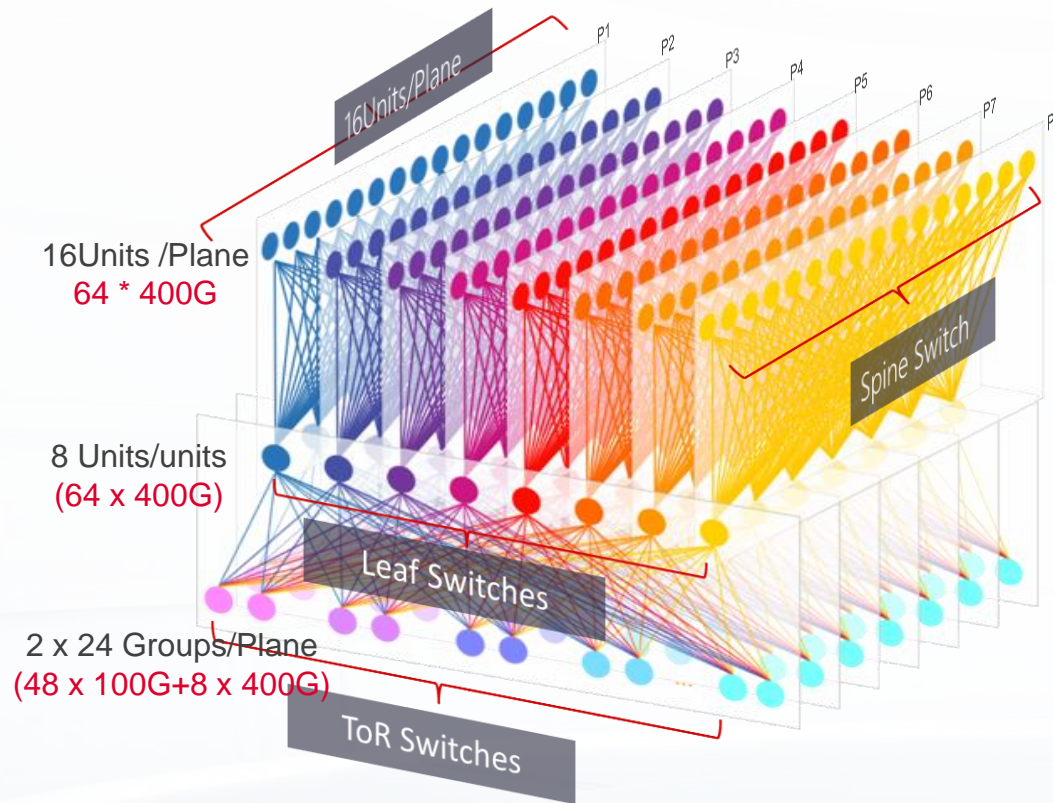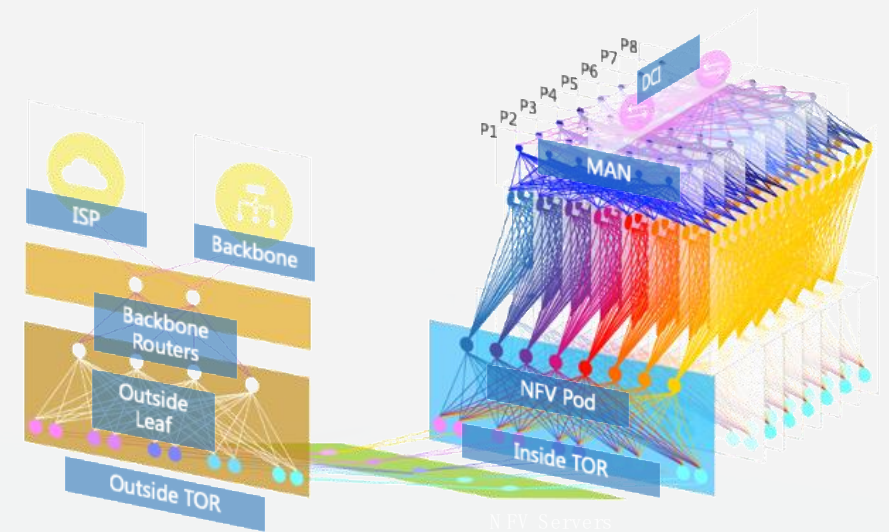– End-to-end intelligent network based on SmartNIC and SmartTOR

OEM

New Brite Box
Branded whitebox

New ecosystem

ODM

SmartNIC

Switch

Build open network with single chip box + multi-plane

16Units/Plane

P1 P2 P3 P4 P5 P6 P7 P8

16Units /Plane
64 * 400G

Spine Switch

8 Units/units
(64 x 400G)

Leaf Switches

2 x 24 Groups/Plane
(48 x 100G+8 x 400G)

ToR Switches

- Build high performance 400G CLOS network based on next-gen switch chipsets
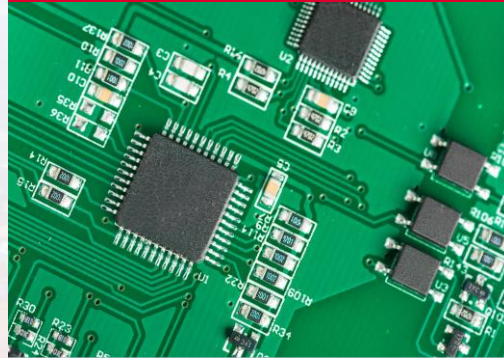
- Build unified and open data center based on SONiC

ISP Backbone

Backbone Routers

Outside Leaf

Outside TOR

DCI

MAN

NFV Pod

Inside TOR

NFV Servers

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Your benefits from our data center network solution

Smooth hyper scaling

- Each PoD server 1K+/2K
- Single cluster server 4.8W+/9.6W

High performance

- Upload speed: 200Gbps per server
- 6.4Tbps per rack 51.2Tbps per POD

Your Unified NOS

- Unified NOS based on SONiC
- Unified maintenance
- Quick evolution based on your own NOS

Lower Cost

- Hardware cost
- Technical cost
- Electricity/space cost

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Building Guaranteed SLA Based on End-to-end Quality Data at Global View

- Based on SmartNIC , this solution provides the offload of network, storage and security for cloud-native business, thereby saving server's CPU resource, and increasing resource utilization efficiency.

- For delay-sensitive services such as storage, SmartNIC can realizes the end-network coaction with switches, and achieve higher performance through end-to-end advanced flow control algorithm

- Based on the programmability of SmartNIC, it realizes flexible capability expansion for cloud-native business and enhances business flexibility.

Global Backbone

Spine

Spine

Leaf

Leaf

SmartNIC

SmartNIC

Server

Server

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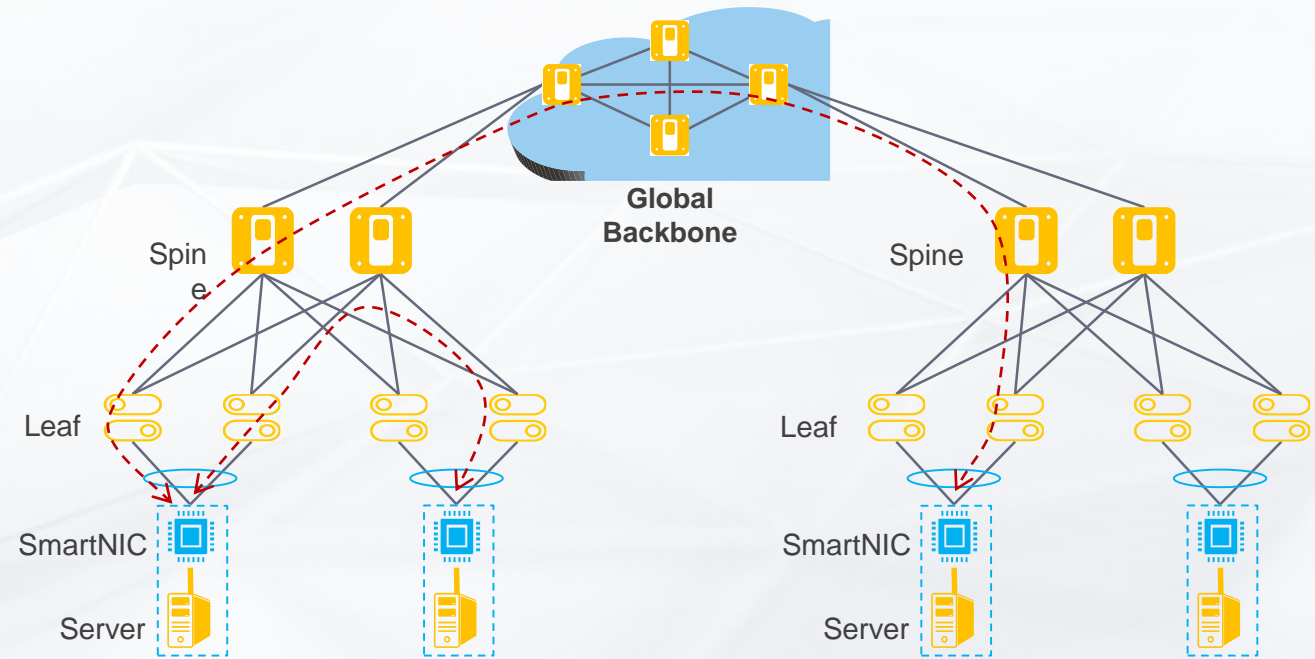
In order to better serve you, we are fully prepared

R&D team with over **20 years'** hardware development experience

Global strategic sourcing
Flexible global production

Serve top OTTs
Open19 Switch deployed by **LinkedIn** and **Google**

01 Hardware **02** Software **03** Supply Chain **04** Global Service **05** Mature Application

20 years's experience on NOS
Providing SONiC service

Provide global aftersales support
Covering over **50 countries**

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Advanced platform technology

- Technical pre-research on key areas (SI, Thermal, Optics) , 2~3 years in advance
- Realized modularization of product design (COMe, Power etc.), to accelerate product iteration
- Pre-research on advanced product technologies via cooperation with customers and suppliers

Platform R&D technology

Hardware platform	Software platform	Test platform	New technology research
• CPU • SI & PCB • Thermal • Mechanical • Clock • PSU & DC-DC • Material	• OS/SONiC platform • OpenBMC/BIOS • P4 • ……	• Hardware test • Software test（RGOS） • Software test（SONiC） • Automation test • ……	• SI（112Gbps SERDES、Cable、PCB） • Thermal • Optoelectronics（Silicon Photonic、COBO） • Power Supply • Smart NIC

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Global Supply Chain

- Broadcom's tier 1 client: collaboration over 10 years
- Strategic partnership with Intel and TI: effective technical support, optimal BOM cost and secured component supply.
- MOU with key component suppliers: e.g., Broadcom, 6-month forecast to ensure supply capacity

	intel · BROADCOM · MARVELL · ASPEED TECHNOLOGY Inc.
	intel · XILINX · Lattice
	TEXAS INSTRUMENTS · IDT INTEGRATED DNA TECHNOLOGIES · NXP · PERICOM Semiconductor Corporation
	Infineon · intersil · TEXAS INSTRUMENTS · ON Semiconductor · DELTA · ARTESYN EMBEDDED TECHNOLOGIES
	intel · hynix · Micron · SAMSUNG
	TE connectivity · molex · Amphenol · LUXSHARE ICT · samtec
	NMB a Minebea Company · Nidec · DELTA · AVC · DOW CORNING · BERGQUIST · Fujipoly
	TTM Technologies Time-To-Market Interconnect Solutions · WUS Group · SCC

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Global manufacturing to ensure large-scale and reliable delivery

- For ToR products, monthly production capacity of 13,000 to 15,000 units
- Under 3 to 5 months Forecast, order to delivery within 3 weeks
- Out of forecast demand, order to delivery lead time 2 to 3 months

Poland

USA

Mexico

China (Fujian+Guangdong)

Malaysia

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Global service system

7*24 Technical Service Capability

- Spare parts & staff can arrive at customer's site in 4 hours for 24/7 in more than 50 countries and regions around the world
- Global 1+7 technical support center, with L1-L3 four-layer architecture, covering major countries/regions

Plenty Value-added Service Options

- Provides value-added service and products options of different level
- Able to provide service productization and customization according to customer's demand
- Able to provide service that covers the whole product lifetime, including product delivery, construction, operation & maintenance, critical time support, flexible training, etc.

Global Spare Parts Service System

- 7*24 spare parts service support system
- Professional spare part inventory monitoring system and designated asset management personnel
- According to customers' demand, capable to quickly build three-layer spare products/parts warehouse that covers more than 50+ countries, (currently available to Hong Kong, Singapore, Indonesia, Malaysia, Russia, Japan, USA)

Custom Clearance

- Able to clear custom in more than 50 countries/regions
- Able to deliver to major Asian and European countries within one week （necessary qualifications acquired）
- Able to cover the whole custom clearance and tax payments process
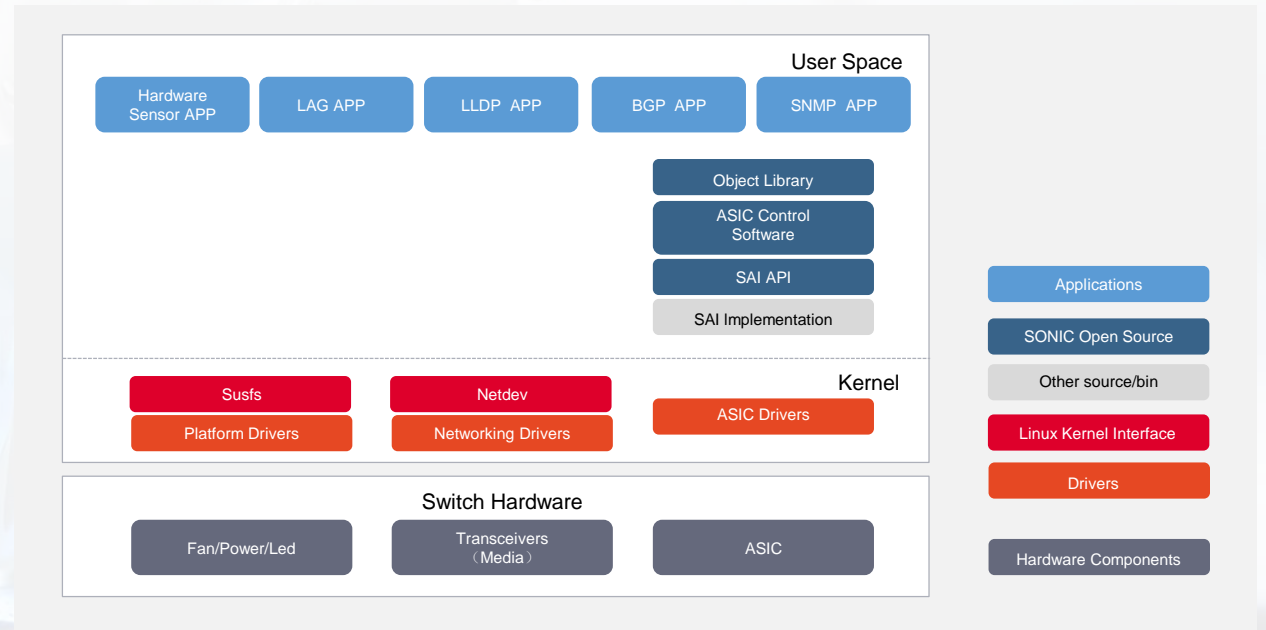
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Building Customized SONiC

Not just simple "Open" SONiC

- Provide quality support, continuous iterative SONiC product and service
- Support customer towards self-development on SONiC （open source + Ragile's service）

Real controllable SONiC

- Self-developed SCD, provided to customers as a service together with SONiC
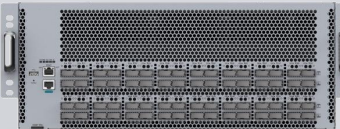- Don't rely on chip manufacturer SAI, business risk mitigation and cost reduction

SCD(Switch Chip Driver), complies with the relevant technical standards of SONiC community SAI

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Ragile brite box switch family

Customized for Hyperscale Data center, Colocation service provider (SONIC ready)

Brite Box

400G

RA-B6930-64QC/TH4
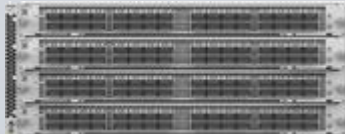
RA-B6930-32CDQ/TH3

200G

RA-B6930-128DC/TH4

RA-B6520-24DC8QC/TD4

100G

RA-B6920-4S/TH3

RA-B6910-64C/TH2

RA-B6510-32C/TD3

RA-B6520-48C8QC/TD4

50G

RA-B6500-32H/TH (Open19)

25G

RA-B6510-48V8C/TD3

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TD3 switch——With **SONiC**

RA-B6510-48V8C

Power supplies(1+1)

Fans(3+1) MGMT Console

- MAC：Trident 3 2.0 Tbps；
- CPU： Intel Xeon D-1527
- Ports：**48 × 25G** （SFP28）+ **8 × 100G** （QSFP28）；
- Power Supply：1+1 redundant & hot-swappable power ,Max Power 300W；
- Fans：3+1 redundant & hot-swappable fans；

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TD3 switch——With SONiC

RA-B6510-32C

MGMT， Console

Power supplies(1+1)

Fans(4+1)

- MAC： Trident 3 3.2 Tbps；
- CPU： Intel Xeon D-1527；
- Ports： **32 × 100G** (QSFP28) ；
- Power Supply： 1+1 redundant & hot-swappable power ,Max Power 450W；
- Fans： 4+1 redundant & hot-swappable fans；

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TH2 switch——With SONiC

RA-B6910-64C
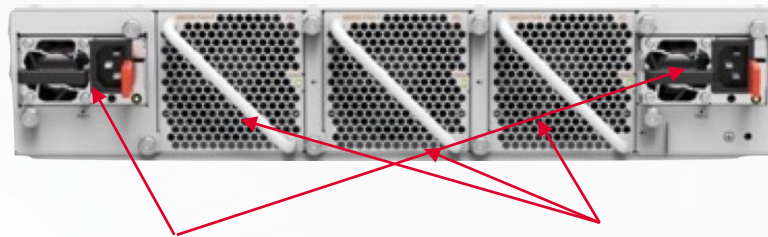
Power supplies(1+1)   Fans(2+1)

- MAC：Tomahawk2 6.4 Tbps；
- CPU： Intel Xeon D-1527
- Ports：**64 × 100G**（QSFP28）；
- Power Supply：1+1 redundant & hot-swappable power ,Max Power 785W；
- Fans：2+1 redundant & hot-swappable fans；

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TH3 switch——With SONiC

RA-B6920-4S

Fans(5+1)　　Power supplies(2+2)

- MAC： Tomahawk3 12.8 Tbps；
- CPU： Intel Xeon D-1527
- Ports： 4 slots for line-cards
  support 128 × 100G （QSFP28） or
  64 × 100G(QSFP28)+ 16 × 400G(QSFP-DD);
- Power Supply： 2+2 redundant & hot-swappable power ,Max Power 2400W；
- Fans： 5+1 redundant & hot-swappable fans；

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TH3 switch——With SONiC

RA-B6920-32QC2X

Power supplies(1+1)   Fans(5+1)

- MAC： Tomahawk3 12.8 Tbps；
- CPU： Intel Xeon D-1527
- Ports： **32 × 400G** （QSFP-DD） + **2 × 10G** （SFP+）
  ；
- Power Supply： 1+1 redundant & hot-swappable power
  ,Max Power 1100W；
- Fans： 5+1 redundant & hot-swappable fans；
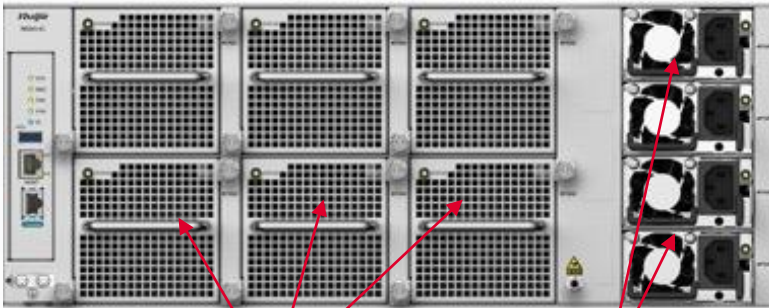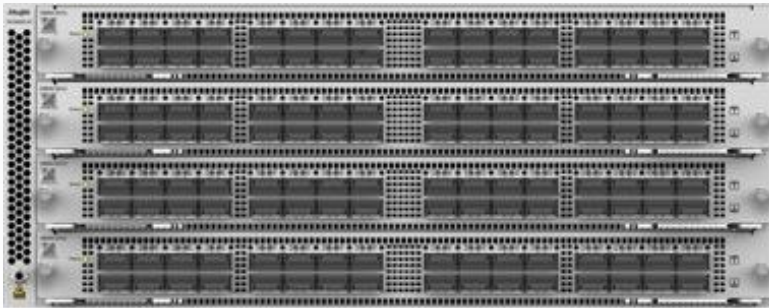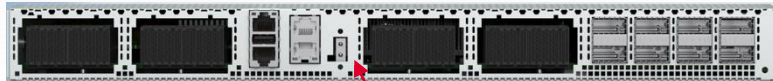
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TH switch——With SONiC

RA-BS6500-32H (Open19)

Power supplies(1)

Fans(4+1)

- MAC： Tomahawk. 3.2 Tbps；
- CPU： Intel Xeon D-1527
- Ports： **48 × 50G** + **8 × 100G** （QSFP28）；
- Power Supply： 1 （Power Shelf）
- power ,Max Power 360W；
- Fans： 4+1 redundant & hot-swappable fans；

TH4 switch——With **SONiC**

RA-B6520-24DC8QC

Power supplies (1+1)　　Fans (5+1)

- MAC：Trident 4 8.0 Tbps；
- CPU： Intel Xeon D-1527
- Ports：**24×200G** (QSFP56) + **8 × 400G** (QSFP-DD)；
- Power Supply： 1+1 redundant & hot-swappable
- Max Power Consumption 850W；
- Fans：5+1 redundant & hot-swappable fans；

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TH4 switch——With **SONiC**

RA-B6520-48C8QC

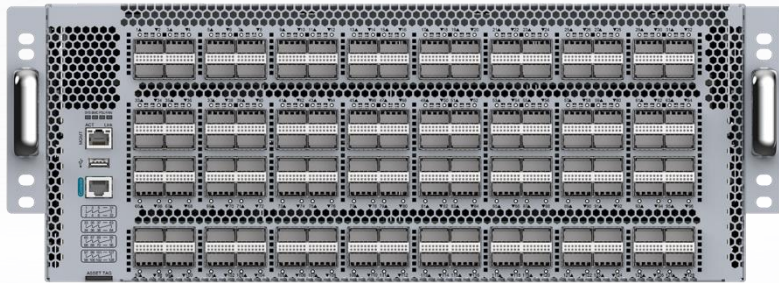
Power supplies (1+1)   Fans (5+1)

- MAC：Trident 4 8.0 Tbps；
- CPU： Intel Xeon D1627
- Ports：**48×100G** (DSFP) + **8 × 400G** (QSFP-DD)；
- Power Supply： 1+1 redundant & hot-swappable
- Max Power Consumption 890W；
- Fans：5+1 redundant & hot-swappable fans；

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TH4 switch——With SONiC

RA-B6930-128DC
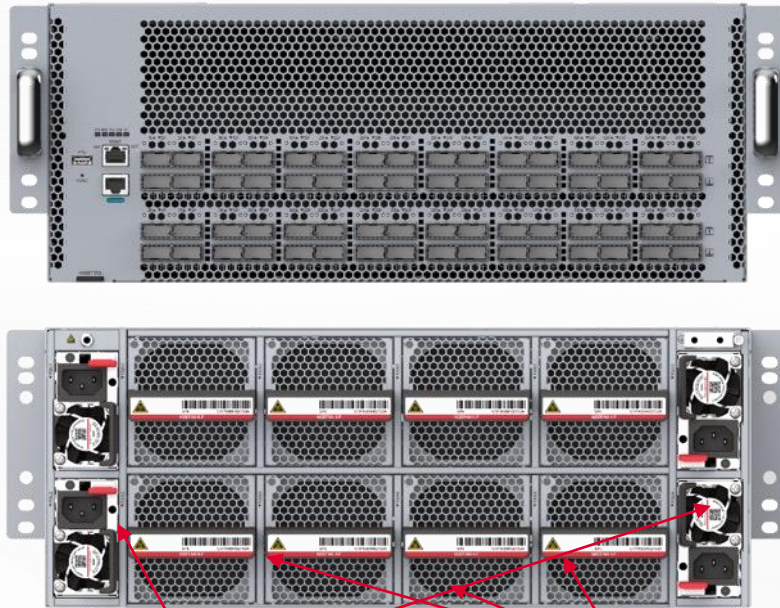

Power supplies (2+2)   Fans (7+1)

- MAC：Tomahawk 4. 25.6 Tbps；
- CPU：Intel Xeon D-1527
- Ports：**128× 200G**（QSFP-DD）；
- Power Supply：2+2 redundant & hot-swappable
- Max Power 2600W；
- Fans：7+1 redundant & hot-swappable fans；

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TH4 switch——With **SONiC**

RA-B6930-64QC

Power supplies (2+2)　　Fans (7+1)

- MAC：Tomahawk 4 25.6 Tbps；
- CPU： Intel Xeon D1627
- Ports：**64× 400G**（QSFP-DD）；
- Power Supply： 2+2 redundant & hot-swappable
- Max Power 2350W；
- Fans：7+1 redundant & hot-swappable fans；

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