Supermicro Solutions

Q2, 2023

Igor Berin
Senior BDM EMEA
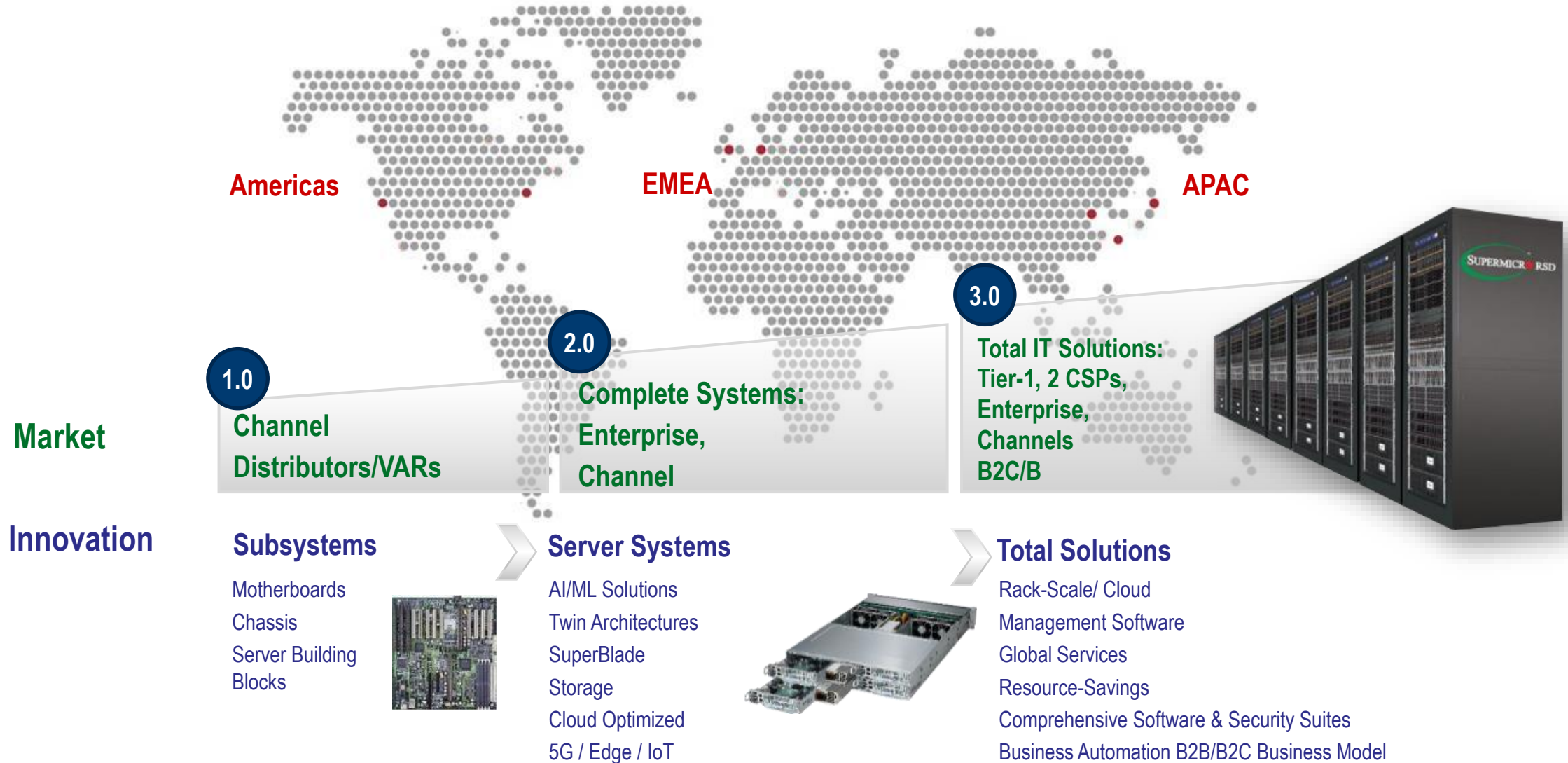
About Supermicro
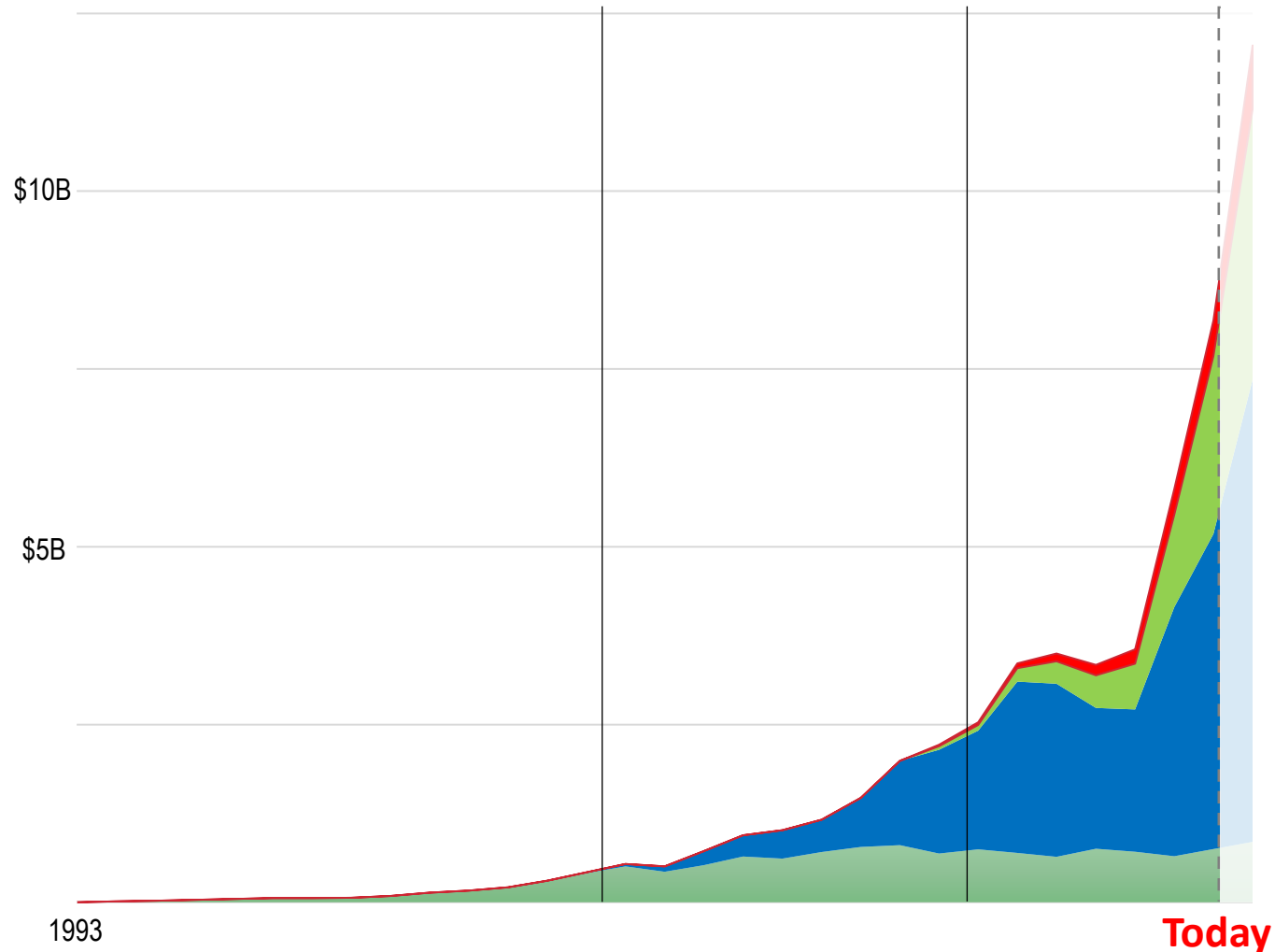
Supermicro Headquarters Campus, San Jose, CA

Supermicro Asia Campus, Bade, Taiwan

Revenue	**$7B+ (FY2023 Target)** **$5.2B (FY2022)** **$3.6B (FY2021)**
Worldwide Presence	**6M+ Sq ft. Facilities Worldwide** 1. Silicon Valley (HQ), 2. Taiwan, 3. The Netherlands, 4. Malaysia and others
Production	**$15B/yr Production Capacity (CY23)** Top 5 Largest Server System Provider Worldwide (IDC & Gartner 2022), ~1.3M units annually
Human Resource in 4 Campuses	5000+ headcount Worldwide, ~50% Technical / R&D
Key Growth Matrix	**8 Quarters of YoY Revenue Growth** **+54% YoY Q2 FY2023 Rev.** **+79% YoY Q1 FY2023 Rev.** 100%+ YoY on *Accelerated Computing*

Business Progression

Americas   EMEA   APAC

Market

1.0
Channel
Distributors/VARs

2.0
Complete Systems:
Enterprise,
Channel

3.0
Total IT Solutions:
Tier-1, 2 CSPs,
Enterprise,
Channels
B2C/B

Innovation

Subsystems

Motherboards
Chassis
Server Building
Blocks

Server Systems

AI/ML Solutions
Twin Architectures
SuperBlade
Storage
Cloud Optimized
5G / Edge / IoT

Total Solutions

Rack-Scale/ Cloud
Management Software
Global Services
Resource-Savings
Comprehensive Software & Security Suites
Business Automation B2B/B2C Business Model

Evolving to a Total IT Solutions Provider

- **5S: Software, Services, Switch, Storage, Security and more**
- **Total Solutions: Enterprise, OEM- Appliance / Cloud**
- **Complete Systems**
- **Sub-systems and Components**

Our Momentum:

~5X+ Faster growth rate than the industry avg rate over the past 12+ months (~50% YoY)

$10B

$5B

1993

Today

Green Computing for the Planet

- ## Improve Industry PUE (Target 1.05)

  - ### Adopting More Efficient Datacenter Cooling

    - Optimal Free-Air Cooling PUE @ 1.06
    - Optimal Liquid or Submerged PUE @ 1.05

  - **>$10B** TCO Savings across industry

  - **>8B Trees** Saved

  - **>30 Fossil Fuel Power Plants** Reduction

Intel® Case Study

300,000+ Supermicro Resource-Saving Blade Servers:

- **$20M** in operating expense savings annually
- Cut refresh costs by **>44%**
- Achieves record PUE of **1.06**

Source: Intel, Supermicro

Worldwide Green Computing Adoption
8+ Billion Trees Saved

Preferred Networks® Case Study

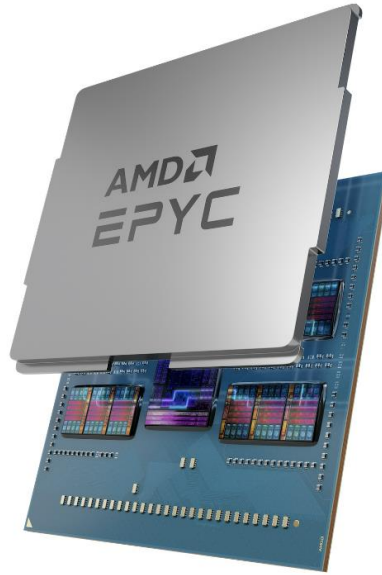**#1 in Green500 '21** – A Supermicro/PFN collaboration:

- Peak performance (theoretical): **3.92 Pflops**
- Performance for every watt of power consumed: **21.11 Gflops/W**

Source: PFN, Green500.org, Supermicro

Green Computing Data Reference:
https://www.statista.com/statistics/1229367/data-center-average-annual-pue-worldwide/
https://www.statista.com/statistics/219596/worldwide-server-shipments-by-
vendor/#:~:text=In%202020%2C%2012.15%20million%20server,figure%20recorded%20in%202018%20too.
https://www.electricrate.com/data-center/electricity-prices-by-country/#:~:text=If%20we%20averaged%20out%20the,the%20global%20average%20electricity%20price.
500MW Coal Power Plant. https://www.mcginley.co.uk/news/how-much-of-each-energy-source-does-it-take-to-power-your-home/bp254/
https://www.energy.gov/fecm/science-innovation/office-clean-coal-and-carbon-management/advanced-energy-systems/transformative
https://www.eia.gov/tools/faqs/faq.php?id=74&t=11
https://www.co2meter.com/blogs/news/could-global-co2-levels-be-reduced-by-planting-trees

Supermicro CPU Vendors

X13

H13

R12

NVDIA Grace CPU

R13

Industry's Most Comprehensive Portfolio

Hyper-E and Hyper
Best-in-Class Performance and Flexibility Rackmount Servers

Ultra and Ultra-E
High Performance & Flexibility Rackmount Systems for Enterprise Applications

Cloud DC
All-in-one Rackmount Platforms for Cloud Data Centers

WIO (UP)
Industry's Widest Variety of I/O Optimized Servers

Mainstream
Versatile Entry Level and Volume Servers for Enterprise Applications

BigTwin®
Highly Modular Multi-Node Systems with Tool-less Design

TwinPro®
Cost-effective 2U Multi-node Platforms

FatTwin®
Advanced Multi-node 4U Twin Architecture with 8 or 4 Nodes

SuperBlade®
High Density x86 Multi-node Server for Enterprise Cloud, HPC

SuperWorkstations
Workstations for High Performance Workloads

MP 4-Way Server
Highest Performance and Flexibility for Enterprise Applications

PCIe GPU Servers
High Density Systems for Double-width, Full Length PCIe GPUs

HGX GPU Servers
High Performance and Flexibility with Advanced Architecture and Thermal Design

SuperStorage®
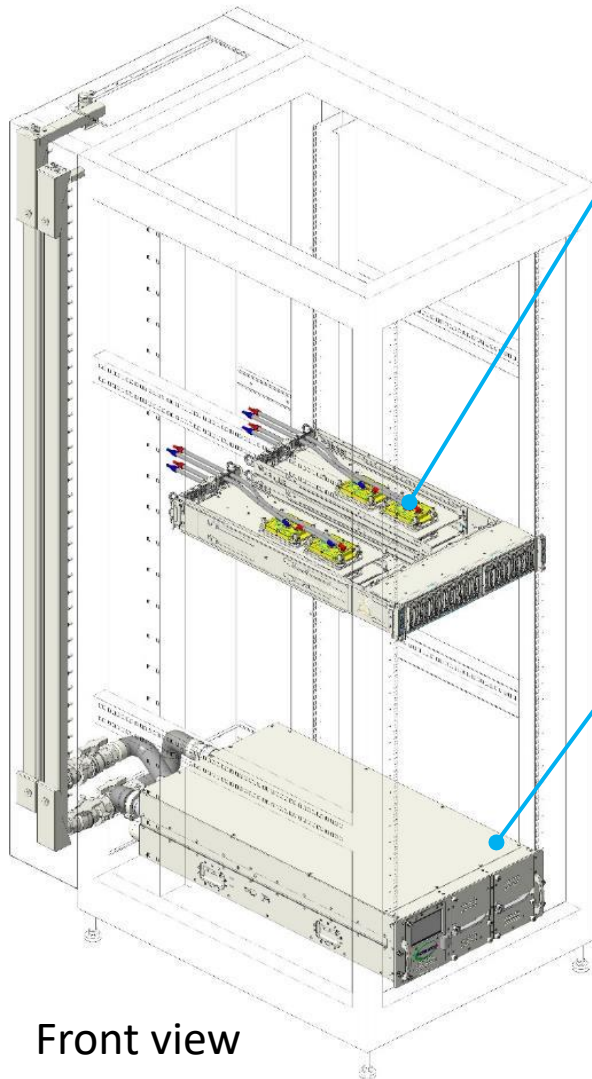Top-loading Server Optimized for Field Serviceability and Field Replacement

IOT/Embedded
High-efficiency, High-performance Compact Form Factor for 5G and Edge computing

Supermicro Rack Integration Services provides a "one-stop-shop" for your data center needs

DCLC Rack Key Components

1 **Cold Plate**
350W

2 **CDU**
Coolant Distribution Unit
80 kW
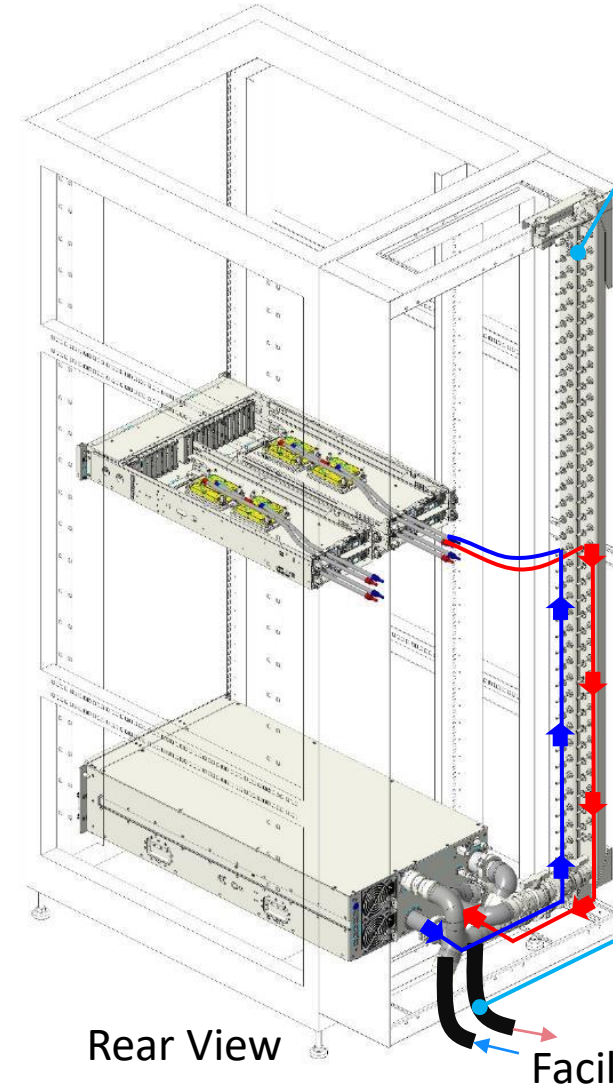
Front view

3 **CDM**
Coolant Distribution Manifold

+

Dry Quick Disconnect

4 **HOSE KIT**
To & From Facility

Rear View

Facility

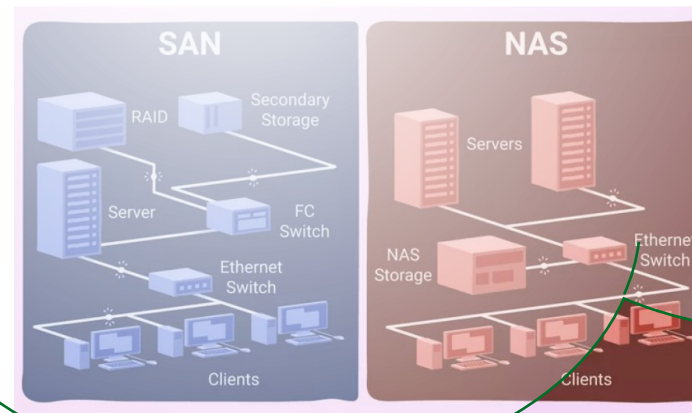# Typical Industry's Workloads

In Mem Data Base

VR, AR, MetaVerse, OmniVerse

Hyperconverged

Gaming

Storage

IoT, O-RAN, Edge

Features

- Supermicro multi-processor systems bring new levels of compute performance and flexibility with support for 4th Gen Intel® Xeon® Scalable processors to support mission-critical enterprise workloads

- 4- and 8-way systems with 4th Gen Intel® Xeon® Scalable processors up to 480 cores

- Large memory footprint with up 64 DIMMs in 2U and 128 DIMMs in 6U up to 32TB of DDR5 Memory

- Next-generation PCIe 5.0 for GPU/accelerator and high-speed network interface cards

- Compute and hybrid storage-optimized configurations

MP SuperServer SYS-681E-TR

Key Applications
In-Memory Database, Virtualization, ERP, CRM, Research Lab/National Lab, Scale -up HPC,

Key Features
- Octa Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors;
- 128 DIMM Slots; Up to 32TB DDR5-4800MHz ECC RDIMM/RDIMM-3DS;
- Optional PCIe configurations up to 24 PCIe slots with support for 12 double-width GPU/Accerlator cards;
- 24x 2.5" Hot-swap NVMe/SAS3/SATA3 drive bays ; 2x internal M.2 NVMe/SATA; Optional RAID support via storage add-on card;
- 10 heavy duty fans w/ optimal fan speed control;

MP SuperServer SYS-241E-TNRTTP

Key Applications
Artificial Intelligence (AI), Business Intelligence, ERP, CRM, Scientific Virtualization, In-Memory Database, HCI, SAP HANA,
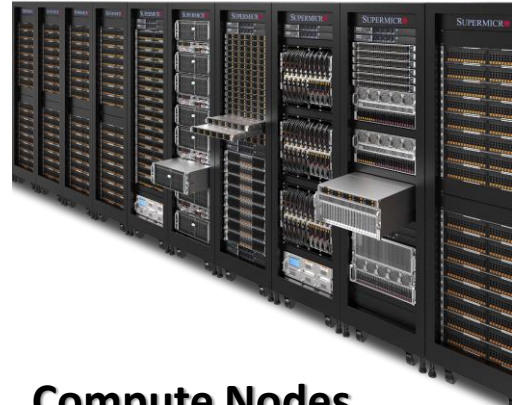
Key Features
- Quad Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors;
- 64 DIMM Slots; Up to 16TB DDR5-4800MHz ECC RDIMM/RDIMM-3DS;
- Optional PCIe configurations up to 8 PCIe slots with support for two double-width GPU/Accerlator cards;
- Flexible networking options with 2 AIOM networking slot (OCP NIC 3.0 compatible);
- 24x 2.5" Hot-swap NVMe/SAS3/SATA3 Hybrid Drive bays (Default with 24 SAS3/SATA3 drive bays); 2x internal M.2 NVMe/SATA; Optional RAID support via storage add-on card;
- 6 heavy duty fans w/ optimal fan speed control;

NVIDIA H100 Tensor Core GPU

Unprecedented performance, scalability, and security for every data center.

Compute Nodes

GPU Nodes

AMD INSTINCT MI250
POWERING DISCOVERIES AT EXASCALE

Media Supercomputer
Arctic Sound - M
75-150W | Xe-HPG | GDDR6 memory

| Industry's Only | Open-Source Media Solution Stack |
| Industry's First | GPU with H.264 AV1 Encode |

X13 SuperBlade®

Ultra High-Density Multi-Node Systems for Enterprise, Cloud, HPC, and AI Applications

Optimized for Performance, Density and Advanced Networking

- Up to 20 nodes in 8U or 10 nodes in 6U with integrated switches
- Single or dual 4th Gen Intel® Xeon® Scalable processors with air-cooled support for up to 350W TDP CPUs
- Up to 32 DIMM slots per node supporting DDR5-4800MHz
- High-performance networking with 400G/200G InfiniBand and 100G/25G Ethernet support
- Up to 4 GPUs per node in a high-density, balanced architecture
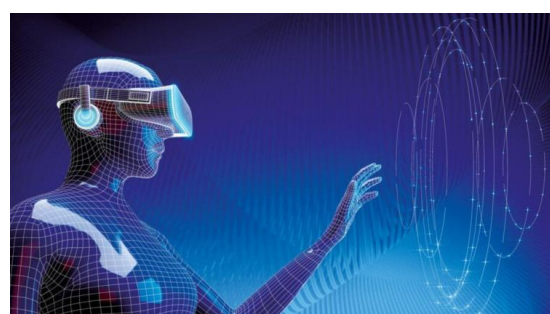- High-performance NVMe support in E1.S, U.2 and M.2 form factors

X13 BigTwin®

Industry-leading Multi-node Architecture

Highly configurable 2U 4-node and 2U 2-node systems optimized for density or storage

- Dual socket architecture featuring 4th Gen Intel® Xeon® Scalable processors
- Optimized thermal design with liquid cooling options
- All-hybrid hot-swappable NVMe/SAS/SATA drive bays - Up to 12 drives per node
- Resource Saving Architecture with shared power and cooling for increased efficiency
- Flexible networking with up to 200G Ethernet per node

X13 Universal GPU

Multi-Architecture Flexibility with Future-Proof Open-Standards-Based Design

Ultimate modularity and customization options for AI and HPC environments

- Dual 4th Gen Intel® Xeon® Scalable processors
- Support for the latest industry standards including PCIe 5.0, DDR5 and Compute Express Link (CXL) 1.1
- Innovative modular architecture designed for flexibility and futureproofing with a range of form factors from 4U to 8U
- Supports next-generation GPUs including NVIDIA H100 and Intel Data Center GPU Max Series
- Optimized thermal capacity and airflow to support CPUs up to 350W and GPUs up to 700W with air cooling
- PCIe 5.0 x16 networking slots and up to 16 U.2 NVMe drive bays

X13 PCIe GPU

High Performance and Flexibility for AI, 3D Simulation and the Metaverse

Maximum Flexibility with up to 10 PCIe GPUs in 4U/5U

- Dual 4th Gen Intel® Xeon® Scalable processors (formerly codenamed Sapphire Rapids)
- Support for the latest industry standards including PCIe 5.0, DDR5 and Compute Express Link (CXL) 1.1
- Supports NVIDIA H100, A100, Intel Data Center GPU Max Series and Intel Data Center GPU Flex Series PCIe GPUs
- Optional 1U expansion for enhanced thermal capacity
- Flexible storage with U.2 NVMe and optional direct-to-CPU storage configurations
- Dual root and direct-connect PCIe configurations available

Supermicro OVX Building Block Solution

Rack-scale and a Full Turn-key Solution (L11/L12)

Scalable Unit / Base Package

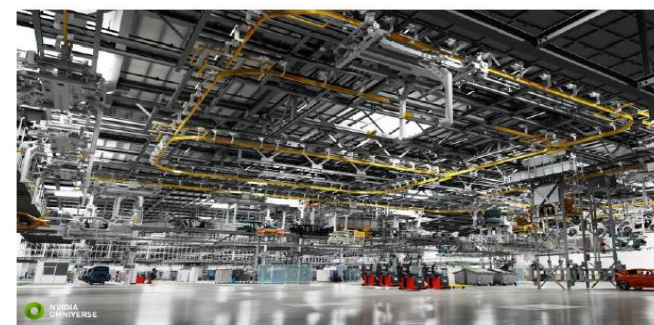|	
Systems	4x Supermicro OVX nodes (SYS-420GP-TNR) 1x Supermicro Nucleus server (SYS-120U-TNR)
Networking	6x 200Gbps 32-port Nvidia SN3700 Ethernet switches, Non-blocking
Graphics	32x Nvidia A40 GPUs
Power	Up to 18.56.kW

Other Notes

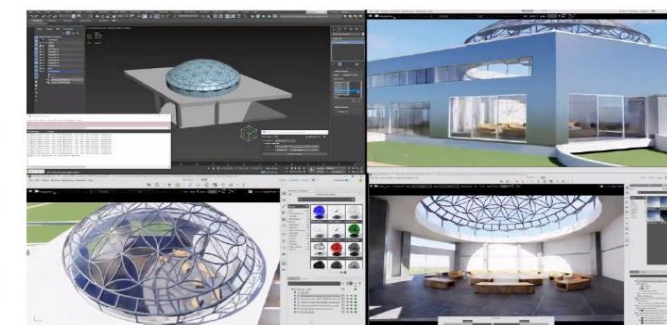Scales-out incrementally via 4-nodes after initial switch counts are met to 16 nodes for a Pod

Logical View — Physical View
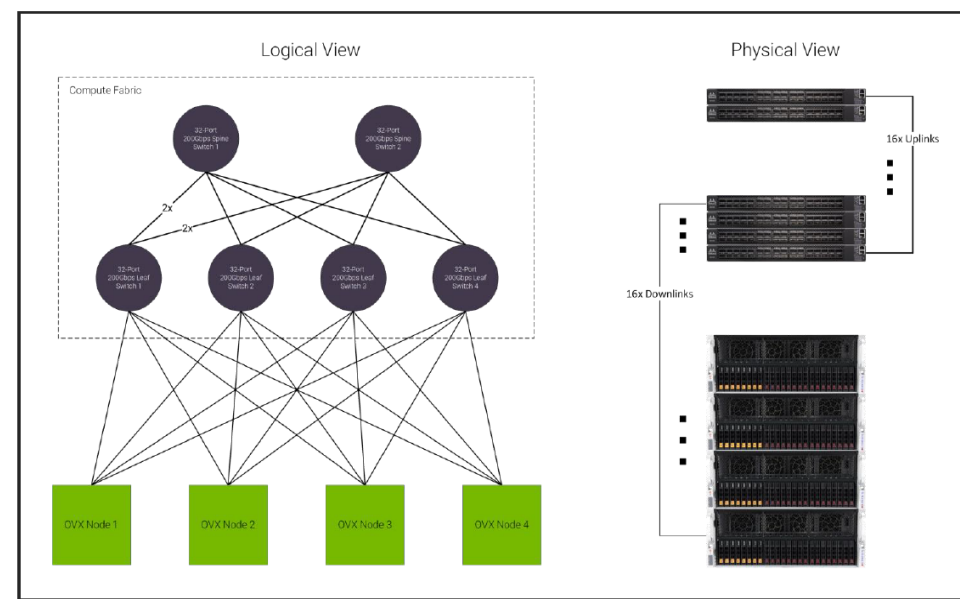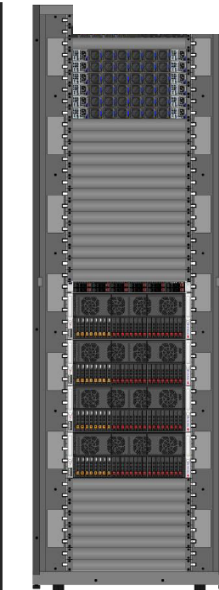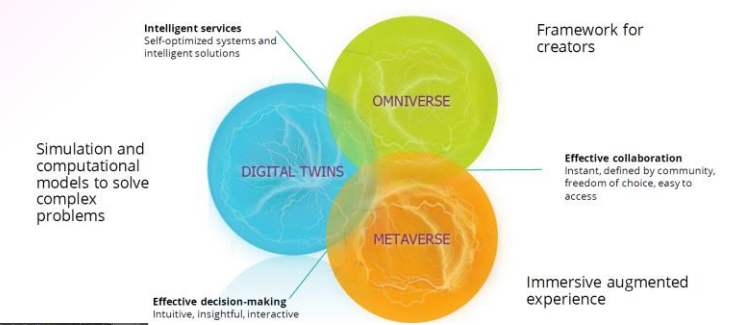
Digital Twins

Simulations and Rendering

Design and Collaboration
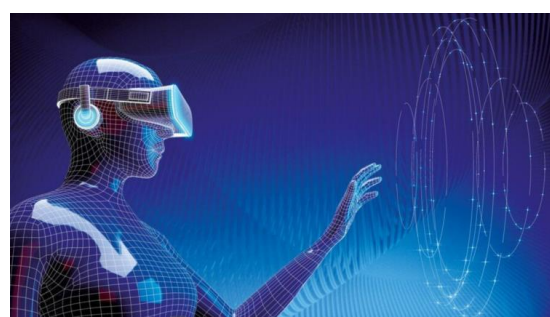
What is NVIDIA Omniverse?

From creation to operation of virtual worlds, built on Universal Scene Description (USD)

BUILD 3D WORLDS
Connect, Aggregate Full Fidelity 3D Pipelines

OPERATE VIRTUAL WORLDS
Persistent, Large-Scale Simulations

Factory Digital Twin

Factory 3D / CAD

Logistics / Planning

Robotics / Assembly

Digital Human Training

Path Tracing

AL/ML

Materials

Physics

Packaging / Transportation

Source: Nvidia

NVIDIA CERTIFIED

NVIDIA L4 Tensor Core GPU
The breakthrough universal accelerator for efficient video, AI, and graphics.

NVIDIA L40 GPU

NVIDIA A2 TENSOR CORE GPU
Entry-level GPU that brings NVIDIA AI to any server.

Versatile Entry-Level Inference

REAL TIME MEANS
REAL CHANGE
NVIDIA QUADRO RTX 4000

NVIDIA A2 Tensor Core GPU

NVIDIA A16
UNPRECEDENTED USER EXPERIENCE AND DENSITY FOR GRAPHICS-RICH VDI

NVIDIA A16 Tensor Core GPU

GPU SuperServer SYS-210GP-DNR

2U 2-Node Multi-GPU System with Single Processor (Intel) and Up to 3 PCI-E GPUs per Node

Key Applications

High Performance Computing, AI/Deep Learning Training, Media/Video Streaming, Industrial Automation, Retail, Cloud Gaming,

Key Features

- Single Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processor;
- Intel® C621A Chipset;
- 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs;
- 3 PCIe Gen 4.0 x16 FHFL DW;
- 2 M.2 NVMe and SATA for boot drive only; 2 front Hot-swap 2.5" U.2 NVMe Gen4 drive bays;
- 2600W Redundant (1+1) Power Supplies Titanium Level (96%) (Full redundancy based on configuration and application load);
- AST2500 BMC;

A+ Server 2114GT-DNR

Key Applications

- Media/Video Streaming
- AI Inference and Machine Learning
- Cloud Gaming
- Industrial Automation, Retail, Smart Medical Expert Systems

Key Features

Two hot-pluggable systems (nodes) in a 2U form factor. Each node supports the following:

1. Single AMD EPYC™ 7003/7002 Series Processor (The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)

2. 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs

3. Up to 6 PCI-E Gen 4 x16 (4 internal, 2 external) slots, 1 PCI-E 4.0 x8 AIOM slot
   M.2 Interface: 2 PCI-E 4.0 x4
   M.2 Form Factor: 2280, 22110
   M.2 Key: M-key

4. Integrated IPMI 2.0 + KVM with dedicated LAN
   • Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS management

X13 Hyper

Best-in-class Performance and Flexibility Rackmount Server

### Flagship Performance 1U and 2U Rackmount Systems

- Dual socket 4th Gen Intel® Xeon® Scalable processors with support for Intel Xeon CPU Max Series
- Free-air and liquid cooling options for maximum performance and efficiency
- 32 DIMM slots per node supporting DDR5-4800MHz
- NVMe SSD support with up to 24 drives in 2U
- Optional 2.5"/E1.S SSD hybrid configuration
- Up to 3 PCIe 5.0 slots in 1U or 8 PCI-E 5.0 slots in 2U
- PCIe 5.0 AIOM slots supporting up to 400G networking
- Tool-less system for simplified maintenance
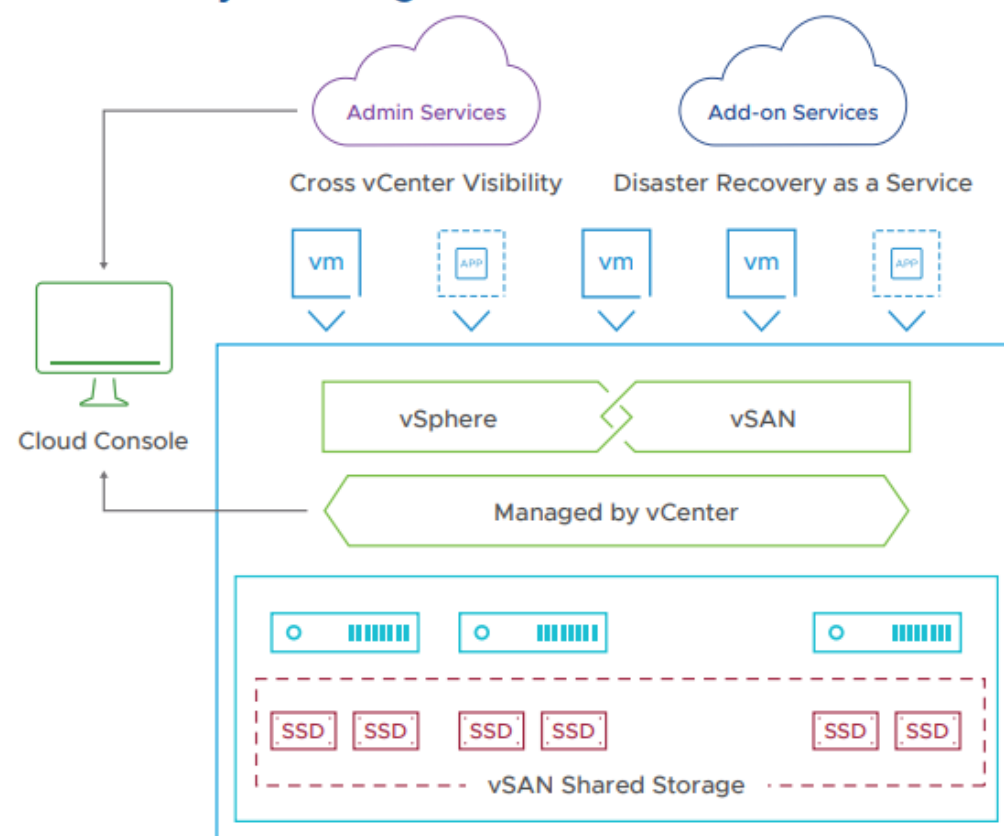
H13 Hyper Systems

Flexible and High Performance for Enterprise Data Centers

1U A+ Server 1125HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2025HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2125HS-TNR (NVMe/SAS/SATA)

Enterprise-focused platform designed for utmost performance and flexibility

Gain high performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical enterprise workloads.

- Dual AMD EPYC™ 9004 Series Processors
- Up to 6TB DDR5-4800MHz in 24 DIMMs
- Flexible NVMe, SAS, and SATA drive options
- Configurable PCIe 5.0 expansion capabilities with CXL 1.1+ memory expansion
- AIOM slots with OCP 3.0 support
- Titanium-Level efficiency power supplies

Hybrid
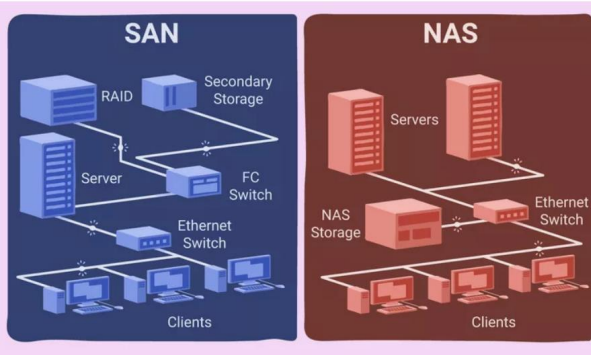
X13 **Petascale All-Flash**

Revolutionary Petascale NVMe for Unprecedented Density and Performance

All-New 1U Storage Architecture

- Dual socket 4th Gen Intel® Xeon® Scalable processors
- 32 DIMM slots per node supporting DDR5-4800MHz
- 2x AIOM supporting PCIe 5.0 x16 and up to 2x PCIe 5.0 x16 slots
- Up to 24 EDSFF Short (E1.S) or 16 E3.S high-performance drives in a 1U chassis
- E1.S (9.5mm and 15mm) or E3.S (7.5mm) form factor support with E3.S 2T x8 CXL support on selected configurations

Storage SuperServer SSG-620P-E1CR24H

Key Features

- Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores Per Node;
- 16 ECC DDR4-3200: LRDIMM/RDIMM;
- Dedicated PCIe 4.0 AIOM slot; 3 x PCIe 4.0 x16 Slots;
- Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN per node;
- 24 3.5" Hot-swap SAS3/SATA3 drives, 4x Rear SATA/NVMe Slots, 2x SATA/NVMe M.2 (form factor: 2280);
- 5x 8cm hot-swap counter-rotate redundant PWM cooling fans;
- 1600W Redundant Power Supplies Titanium Level (96%);
- HW RAID support via Broadcom® 3908;

Storage SuperServer SSG-640SP-E1CR90

Key Features

- 16 ECC DDR4-3200: LRDIMM/RDIMM;
- 3 x PCIe 4.0 x16 HHHL PCIe slots;
- 90 3.5"/2.5" Hot-swap SAS3/SATA3 drives, 2x Fixed slim SATA SSD, 2x NVMe M.2 (form factor: 2280 and 22110);
- 6 x 8cm hot-swap counter-rotate redundant PWM cooling fans;
- 2600W Redundant Power Supplies Titanium Level (96%);
- Drive Controller support via Broadcom® 3916 or 3616; Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN;

MINIO — Object

WEKA — Parallel File

Qumulo — Object/File

SCALITY — Object/File

OSNEXUS — Block

Software Defined Storage (SDS)
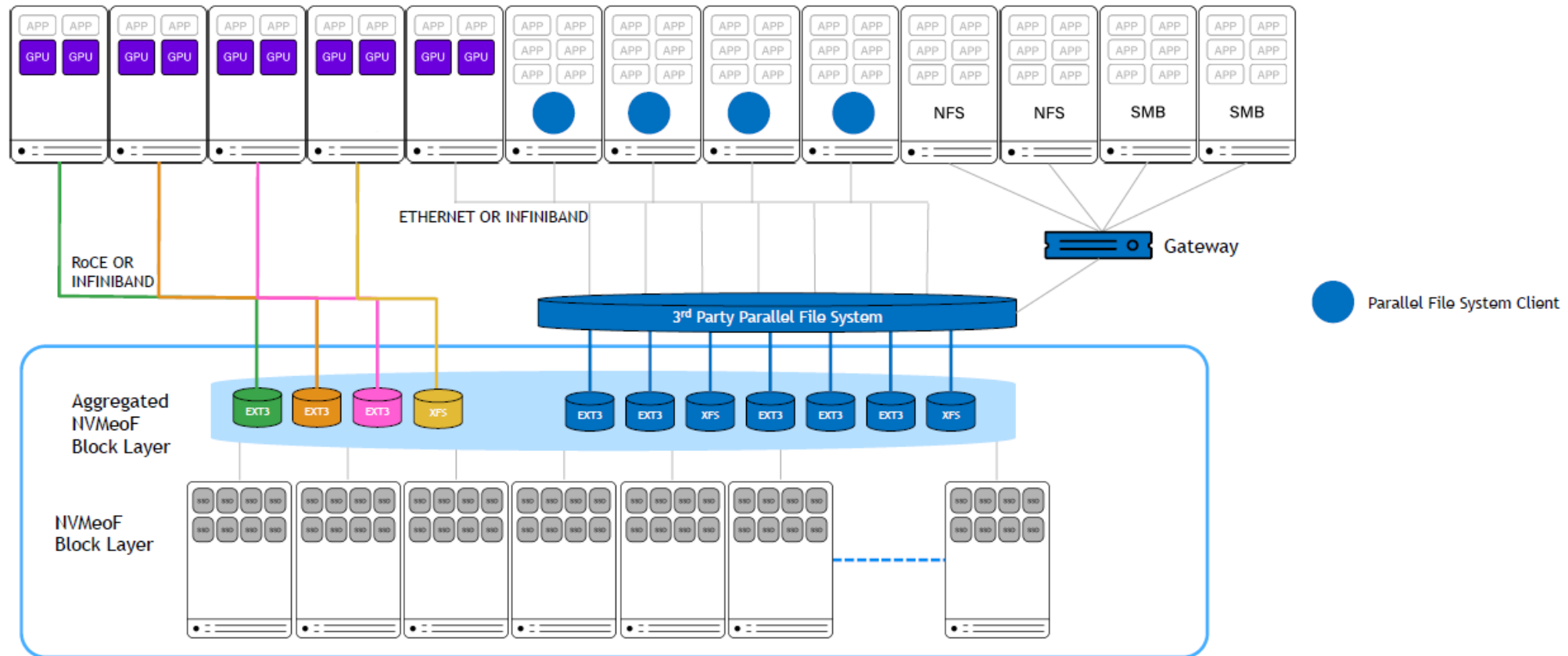
Software Defined Storage (SDS)

SCALITY

SUPERMICR
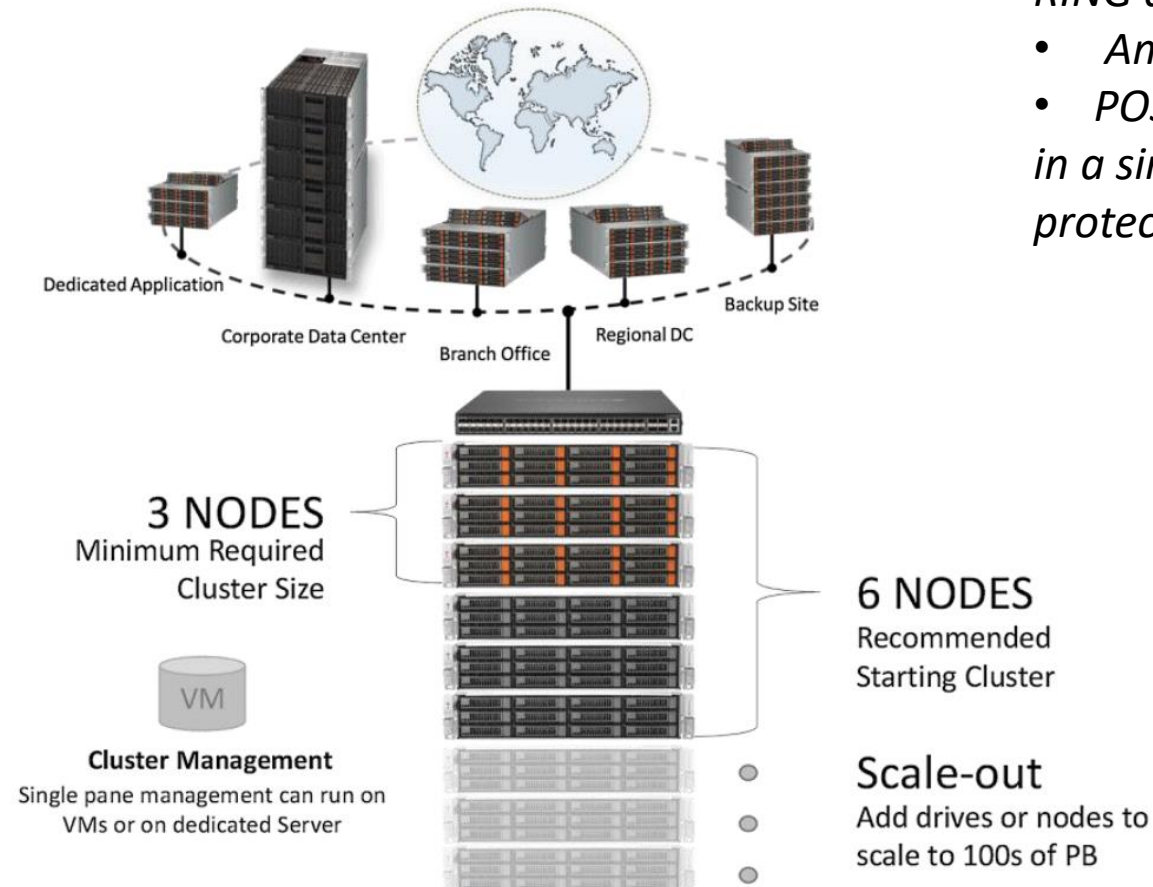
Scality RING
Scale-out Storage Solution

RING delivers comprehensive:
- *Amazon S3-compatible object storage,*
- *POSIX-compatible NFS and SMB*

in a single system with enterprise-grade data protection.

Supermicro All Flash EDSFF

EDSFF E1.S

EDSFF E3

EDSFF E1.L

Capacity Scaling
- Wider PCBs for more flexible NAND Chip layouts

Performance Scaling
- Scalable Connector Design, Multiple Link widths (x4, x8, x16) and support different power profiles

Thermal Efficient
- Improvements for thermal and cooling management

Future Proofed
- Common connector for all form factors and more robust signal integrity for future PCIe generations

Solution Range
- Wild range of power profiles (20W - 70W) for higher capacity/performance SSDs

All Major Vendors Support E1.S and E3.S New Form Factors (Updated 7/27)

Form Factor	Vendor	Series	Interface PCIe	Max Capacity (TB)	DWPD	Samples Schedule	MP Schedule	Notes
E1.S	Solidigm	D7-P5520	Gen4 x4	7.68	1	Available	Late Q3'22	9.5mm, 15mm
		PE8110	Gen4 x4	7.68	1	Available	Available	15mm
	Kioxia	XD6	Gen4 x4	3.84	1	Available	Available	9.5mm
		XD7	Gen4 x4	7.68	1	Q4'22	Q4'22	9.5mm
	Micron	7450	Gen4 x4	7.68	1/3	Available	Q3'22	5.9mm, 15mm, 25mm
		7500	Gen4 x4	7.68	1/3	Q2'23	Q2'23	15mm
	Samsung	PM9A3	Gen4 x4	3.84	1	Available	Available	9.5mm
E3.S	Solidigm	D5-P5430	Gen5 x4	15.36	0.5	Q1'23	Q2'23	7.6mm
	Kioxia	CD7	Gen5 x4	15.36	1	Q3'22	Limited Available	sample requested
		CM7-V	Gen5 x4	12.8	3	Q4'22	Q4'22	
		CM7-R	Gen5 x4	30.72	1	Q4'22	Q4'22	
	Micron	9500	Gen5 x4	30.72	1/3	Q1'24	Q2'24	7.6mm
	Samsung	PM1743	Gen5 x4	15.36	1/3	Q4'22 (EVT)	Q2'23	sample requested

Optimized Platform for 5G/Telco Applications

Highlight Systems

SuperEdge
SYS-210TP-HPTR
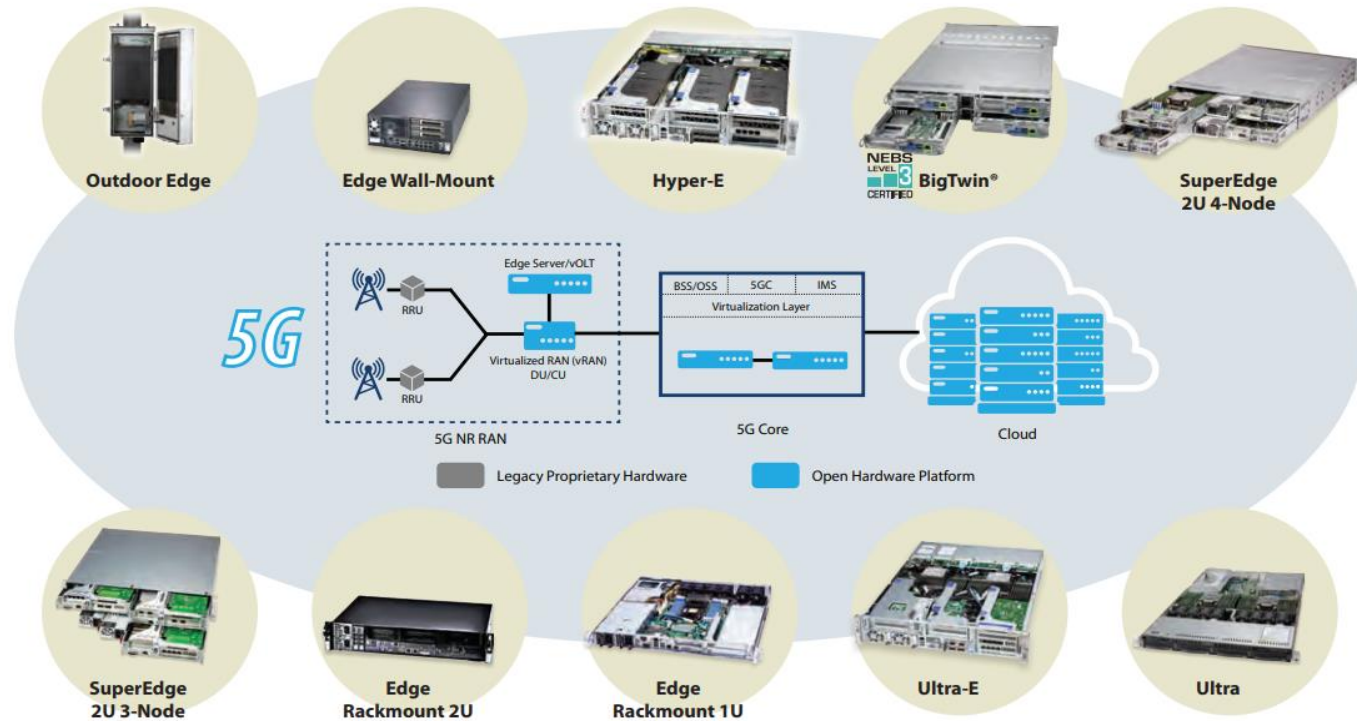SYS-210TP-HPTRD

SuperEdge NEW!
SYS-211SE-31A
SYS-211SE-31D

Hyper-E NEW!
SYS-221HE-FTNRD
SYS-221HE-FTNR

Edge Rackmount 2U NEW!
SYS-211E-FRN2T
SYS-211E-FRDN2T
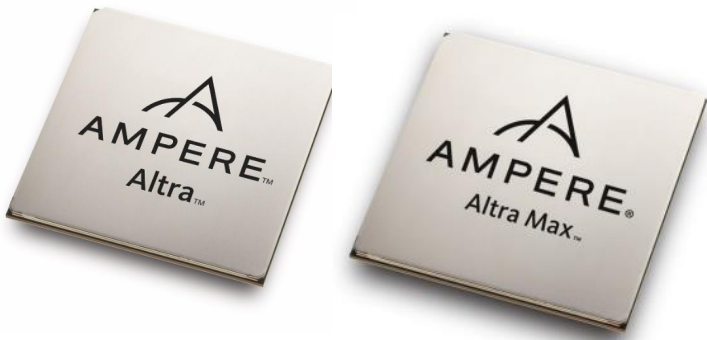
Edge Rackmount 1U NEW!
SYS-111E-FWTR
SYS-111E-FDWTR

Outdoor Edge
SYS-E403-9D-16C-IPD2
SYS-E403-9D-14CN-IPD2
SYS-E403-9D-16C-IP

vmware® ESXi Arm Edition

MegaDC SuperServer ARS-210M-NR

Key Applications
High Performance Computing, Immersive Media, Cloud Gaming / AICAN, AI Inference / Training, Dense-VDI, Video-on-Demand,

Key Features
- Single Socket Ampere® Altra® Processor (Up to 80 Cores; Up to 3.3Ghz) / Single Socket Ampere® Altra® Max Processor (Up to 128 Cores; Up to 3.0Ghz) ; Up to 250W TDP;
- 16 DIMMs; Up to 4TB ECC Registered DDR4-3200MHz RDIMM/LRDIMM;
- Supports up to 4 PCIe 4.0 x16 Double Wide GPU Cards (Up to 300W per GPU), 1 PCIe 4.0 x16 LP Slot, 1 AIOM Slot (OCP3.0 Mezzanine Compatible);
- 2x 10GbE LAN SFP28 Ports via Mellanox ConnectX®-4 Lx EN Controller (or 1x 25GbE LAN SFP28 Port w/Redundancy);
- 4x 2.5" U.2 NVMe Hot-Swap Drive Bays (Options available for up to 16 or 24 Drive Bays via a Modular Bay Design);
- 1600W Redundant Titanium Level High-efficiency Power Supplies;
- 1 VGA, 1 (Serial) Micro USB Port, 2 USB3.0 (2 Rear);

GPU	Supported GPU: NVIDIA A16
	NVIDIA A100

MegaDC SuperServer ARS-110M-NR

Key Applications
Enterprise Server, Hyperscale Data Center, Front End Server, Infrastructure,

Key Features
- Single Socket Ampere® Altra® Processor (Up to 80 Cores; Up to 3.3Ghz) / Single Socket Ampere® Altra® Max Processor (Up to 128 Cores; Up to 3.0Ghz) ; Up to 250W TDP;
- 16 DIMMs; Up to 4TB ECC Registered DDR4-3200MHz RDIMM/LRDIMM;
- 3 PCIe 4.0 x16 (LP) Slots, 1 AIOM Slot (OCP3.0 Mezzanine Compatible);
- 2x 10GbE LAN SFP28 Ports via Mellanox ConnectX®-4 Lx EN Controller (or 1x 25GbE LAN SFP28 Port w/Redundancy);
- 10x 2.5" U.2 NVMe Hot-Swap Drive Bays;
- 800W Redundant Platinum Level High-efficiency Power Supplies;
- 1 VGA, 1 (Serial) Micro USB Port, 2 USB3.0 (2 Rear);

MegaDC SuperServer ARS-520M-NRG

Key Applications
VDI, Hyperscale Data Center, High End Enterprise Server, GPU Accelerated Compute, GPU Computing, Cloud Video Streaming,

Key Features
- Single Socket Ampere® Altra® Processor (Up to 80 Cores; Up to 3.3Ghz) / Single Socket Ampere® Altra® Max Processor (Up to 128 Cores; Up to 3.0Ghz) ; Up to 250W TDP;
- 16 DIMMs; Up to 4TB ECC Registered DDR4-3200MHz RDIMM/LRDIMM;
- Supports up to 2 PCIe 4.0 x16 Double Wide GPU Cards, 1 PCIe 4.0 x16 LP Slot, 1 AIOM Slot (OCP3.0 Mezzanine Compatible);
- 2x 10GbE LAN SFP28 Ports via Mellanox ConnectX®-4 Lx EN Controller (or 1x 25GbE LAN SFP28 Port w/Redundancy);
- 12x 2.5" U.2 NVMe Hot-Swap Drive Bays;
- 1600W Redundant Power Supplies Titanium Level High-efficiency;
- 1 VGA, 1 (Serial) Micro USB Port, 2 USB3.0 (2 Rear);

QEMU

WINE

GPU SuperServer ARS-221GL-NR

Key Applications

High Performance Computing, AI/Deep Learning Training, Large Language Model (LLM) Natural Language Processing, General purpose CPU workloads, including analytics, data science, simulation, HPC, application servers, and more,

Key Features

- High density 2U GPU system with up to 4 NVIDIA® H100 PCIe GPUs; PCIe-based H100 NVL with NVLink Support; Highest GPU communication using NVIDIA® NVLINK™;
- Energy-Efficient NVIDIA Grace™ CPU Superchip with 144 Cores;
- 480GB or 240GB LPDDR5X onboard memory option for minimum latency and maximum power efficiency;
- 7 PCIe 5.0 x16 FHFL Slots;
- NVIDIA BlueField-3 Data Processing Unit Support for the most demanding accelerated computing workloads.;
- E1.S NVMe Storage Support;

	Grace CPU Superchip
Core Architecture	Neoverse V2 Cores: Armv9 with 4x128b SVE2
Core Count	144
Cache	L1: 64KB I-cache + 64KB D-cache per core L2: 1MB per core L3: 234MB per superchip
Memory Technology	LPDDR5X with ECC, Co-Packaged
Raw Memory BW	Up to 1 TB/s
Memory Size	Up to 960GB
FP64 Peak	7.1 TFLOPS
PCI Express	8x PCIe Gen 5 x16 interfaces; option to bifurcate Total 1 TB/s PCIe Bandwidth. Additional low-speed PCIe connectivity for management.
Power	500W TDP with Memory, 12V Supply

System Management Software

	Standard	Basic	Advanced	Enterprise
Description	Covers all core functionality to effectively set up, manage, and monitor your Supermicro systems. These features are available to all Supermicro users.	Extends the core functionality and makes system management easier with additional features, such as remote BIOS management and system updates.	Delivers a broad set of tools to help administrators improve the performance, up-time, and monitoring of Supermicro systems.	Offers an extensive platform to manage large data centers and coordinate automated lifecycle management, software-defined infrastructure, and more in a single pane of glass.
License	No license required	SFT-OOB-LIC	SFT-DCMS-SINGLE	SFT-DCMS-SINGLE + SFT-SDDC-SINGLE
Key features[1]	• Secure remote console (KVM/HTML5) • System temperature monitoring • System power thresholds & alerts • Component monitoring • Email alerting • Remote configuration • Offline diagnostics • Crash dump • License management	• Remote BMC management • Remote BIOS management • Out-of-Band systems checks • TPM Provisioning • Mount/Unmount ISO images from Samba/HTTP • Basic Redfish APIs • CIM management • SysLog	• Remote OS deployment • Auto-discovery • Power capping • RAID monitoring and configuration • HDD monitoring • Advanced Redfish APIs • FW update policy • System lock down • Crash screen/video capture	• 3rd Party vendor support • POD & Rack-level management • SDI Lifecycle management • Manage Composable Dissagregated Infrastructure • Zero-touch provisioning for network configuration • Single pane of glass for data center deployment • Rich analytics & telemetry • User defined role-based access control

Service-Level Options

- **4-Hour Onsite Response**

  A Supermicro authorized representative will arrive at the customer's site to begin hardware maintenance service within 4 hours after the service request has been received, the issue has been identified, and spare parts have been received onsite.

- **Next Business Day Response**

  Service is available 8 hours per day within standard business hours, Monday to Friday, excluding local holidays. A Supermicro authorized representative will arrive at the customer's site to begin hardware maintenance service the next day after the service request has been received, the issue has been identified, and defective parts have been determined and shipped.

- **Integration Service**

  Supermicro defines the requirements for the installation, upgrade or migration. We perform the planning, identify service requirements, create and execute the project plan, conduct verification testing, training, and provide technical documentation.

The Bottomline!

- Supermicro is:
  - Unmatched Revolutionary Design Enabling You Fantastic Flexibility Configuring Your SyS!
  - Best PUE
  - Best TCO
  - Fantastic robustness and reliability (less than 0,3% failure rate)
  - Best price/performance Ratio
  - L12 Rack Design and Implementation
  - Ahead of Competition with new chipsets generations

  Don't trust the above?? Try us!!!

  Local and remote POC welcome!

https://www.supermicro.com/en

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Thank You

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