Supermicro Solutions

Q1, 2024

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Senior BDM EMEA

ABOUT SUPERMICRO

Revenue	**$14B+** (FY2024 guidance) $7.1B (FY2023) $5.2B (FY2022)
Worldwide Presence	**6M+ Sq ft. Facilities Worldwide** 1. Silicon Valley (HQ), 2. Taiwan, 3. The Netherlands, 4. Malaysia and others
Production	**$18B/yr Production Capacity (CY23)** Top 5 Largest Server System Provider Worldwide (IDC & Gartner 2022), ~1.3M units annually
Human Resource in 4 Campuses	6000+ headcount Worldwide, ~50% Technical / R&D
Key Growth Matrix	**#1** in Generative AI and LLM Platforms 500%+ YoY Growth in Accel. Computing

BUSINESS FOCUS

Building Block Solutions

- Optimized subsystem design, including Motherboard, I/O, Chassis, Power supply, Thermal solution, Firmware, BMC, Security and Management Software, at scale

- Enable industry's broadest AI/Server/Storage/Edge/IoT product portfolio

- Customer time-to-market advantage

Rack-Scale Solutions

- Plug-and-play design enables customers to plug in network & power, and ready to go on-line

- Onsite deployment and service

- Management and security software increase value and competitive advantages

Green Computing

- High efficiency system designs, free air/liquid cooling

- Save up to 40% TCO for many of our partners

- Industry-wide green computing adoption could save $10B per year of energy cost
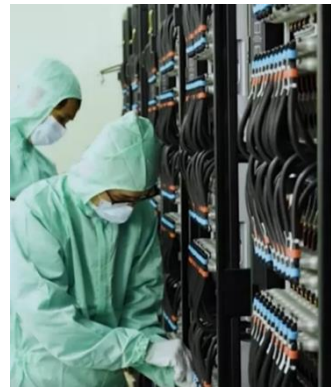
Business Automation

- Operation and sales automation to efficiently serve enterprise and any size of business

- Command Center to provide 24/7 security and support

Supermicro 4.0 (Coming Soon)

- Green computing everywhere

- Enhanced system/cloud software/application products

- New features and products for DC/Cloud total solutions

- More details later
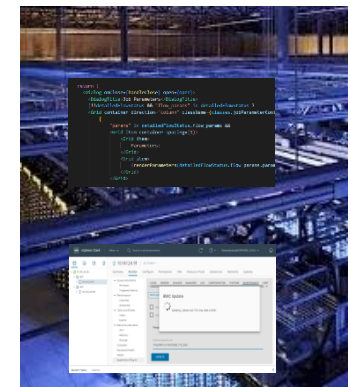
GLOBAL PRESENCE

Production scale and cost optimization
Economy of Scale and Cost

- **Silicon Valley Green Computing Park B20-B23**
  - Rack-Scale Integration (Liquid Cooling)
  - Command Center
  - B2B/C Programs
  - Cloud Services

- **APAC Science and Tech Center B62**
  - Increase 2X-3X APAC capacity in FY24, 25, 26

- **Supermicro Malaysia Campus**
  - High Volume Subsystem and Rack-Scale Production by Q3 2024
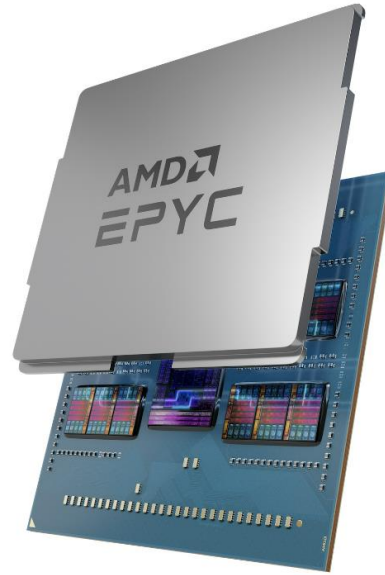
Future Site Plans

- Additional Silicon Valley locations
- Additional Netherlands facility
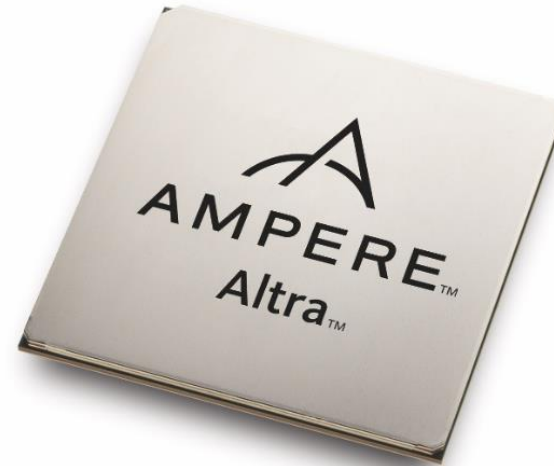- Mexico, Texas sites (in plan)

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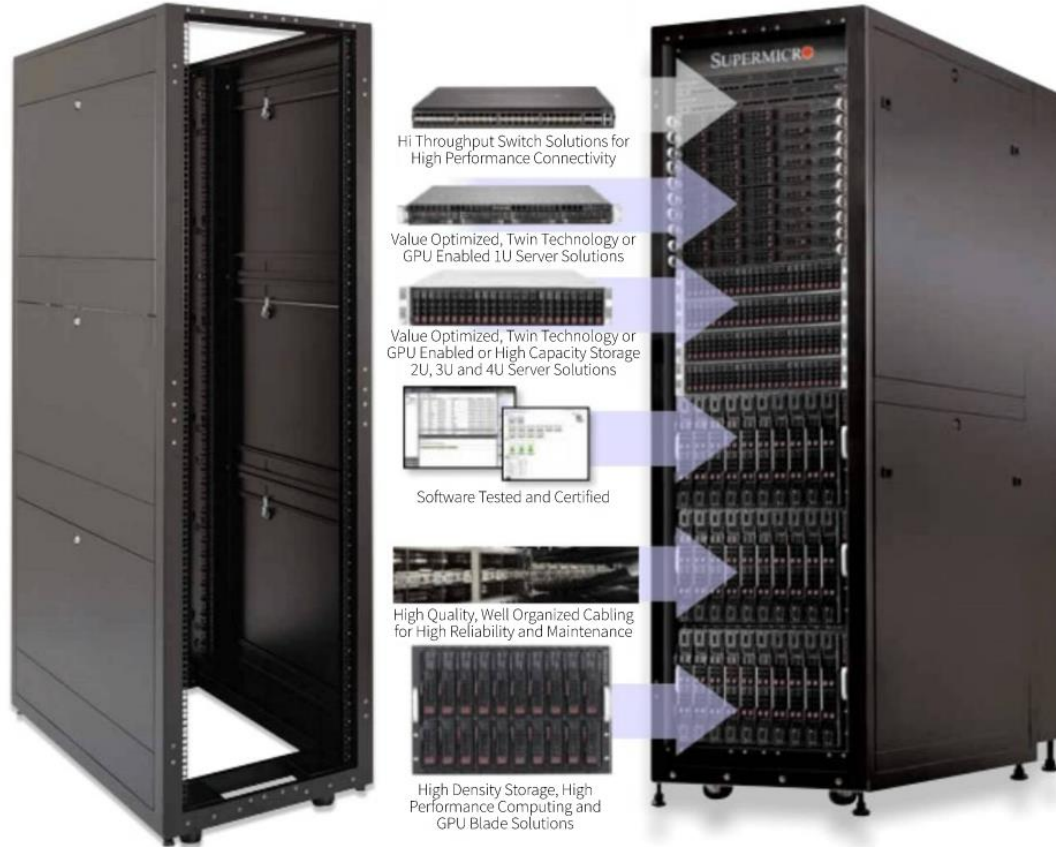Top-loading Server Optimized for Field Serviceability and Field Replacement

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

Optimized and Lab Tested Components for Superior Performance

Turn-Key Data Center

Accelerate Your Deployment

Professional Rack Level Design

Validation and Benchmarking

Hi Throughput Switch Solutions for High Performance Connectivity

Value Optimized, Twin Technology or GPU Enabled 1U Server Solutions

Value Optimized, Twin Technology or GPU Enabled or High Capacity Storage 2U, 3U and 4U Server Solutions

Software Tested and Certified

High Quality, Well Organized Cabling for High Reliability and Maintenance

High Density Storage, High Performance Computing and GPU Blade Solutions

- Server
- Storage
- Network
- Software
- Cabling
- Power and Cooling
- Testing
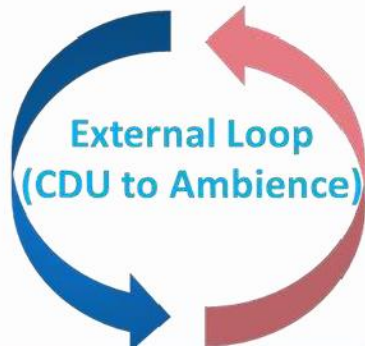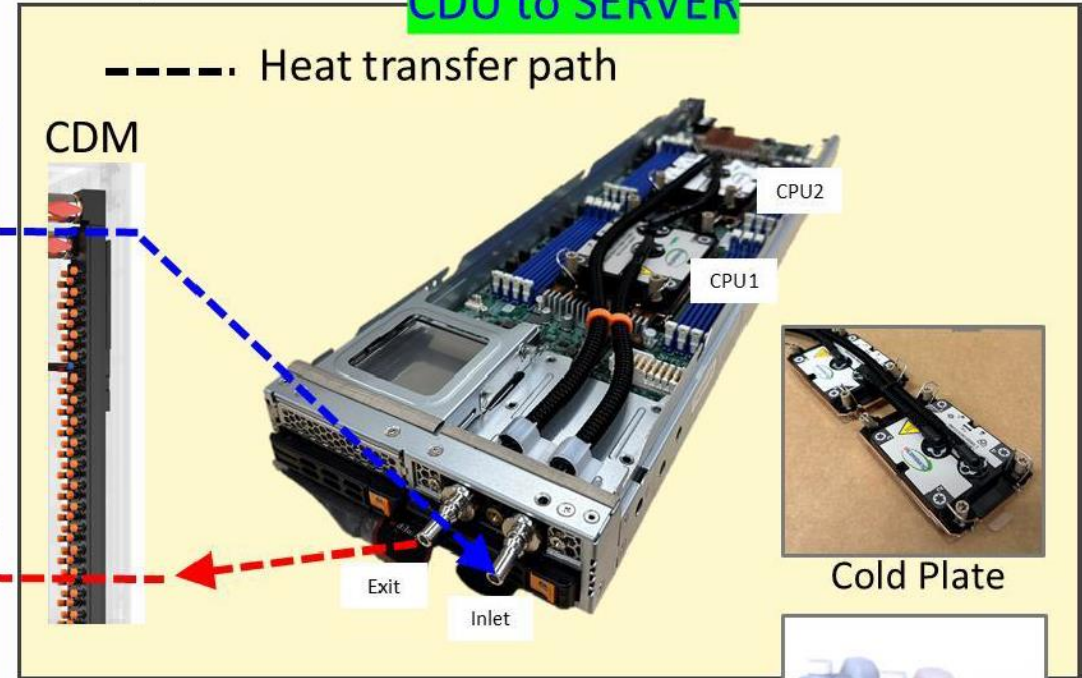- Benchmarking
- Full Rack Burn-in

Direct Liquid Cooling (DLC)

Typical Industry's Workloads
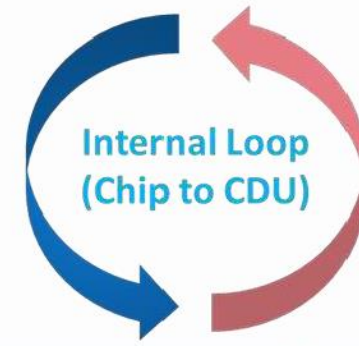
Hyperconverged

GPU: AI, ML, Metaverse, Omniverse
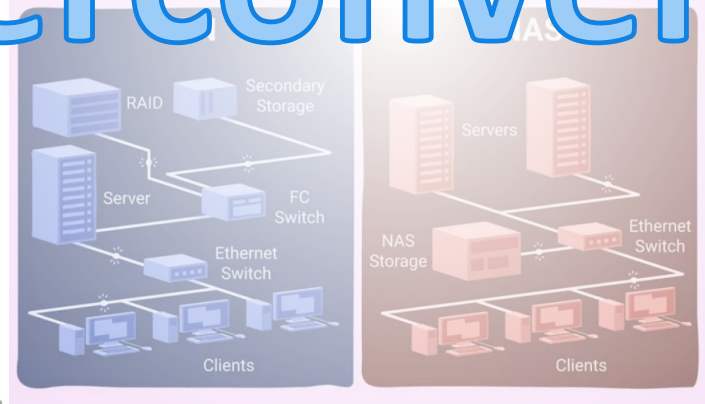
In Mem Data Base

Gaming, Video Surveillance/Analytics

SDS Storage

IoT, O-RAN, Edge

Accelerate Everything

GPU Optimized Systems to Achieve 5X, 10X,… 100X Performance

Large Scale AI Training Workloads

Large language models, Generative AI training, autonomous driving, robotics

HPC/AI Workloads

Engineering simulation, scientific research, genomic sequencing, drug discovery

Enterprise AI Inference & Training

AI-enabled services/applications, chatbots, business automation

Visualization and Design

Graphical content development and automatic generation, digital twins, 3D collaboration

Content Delivery and Virtualization

Content delivery networks (CDNs), video transcoding, live streaming, VDI

AI Edge

Retail automation, manufacturing/logistics automation, medical diagnosis/predictive care, security, and many more

GPU Platforms

Highest Performance and Flexibility for AL/ML and HPC Applications

HGX Platforms

8U-8GPU SYS-821GE-TNHR

Integrated Performance, HGX H100 8-GPU

4U-8GPU SYS-421GE-TNHR2 LCC

Integrated Performance, HGX H100 8-GPU

5U/4U-4GPU SYS-521GU-TNXR

Scalable Performance, HGX H100 4-GPU

PCIe Gen5 Platforms

5U-10 GPU SYS-521GE-TNRT

Dual Root , PCIe GPU

4U-10 GPU SYS-421GE-TNRT

Dual Root, Direct Connect PCIe GPU

4U-4GPU SYS-741GE-TNRT

Flexible Solution, PCIe GPU
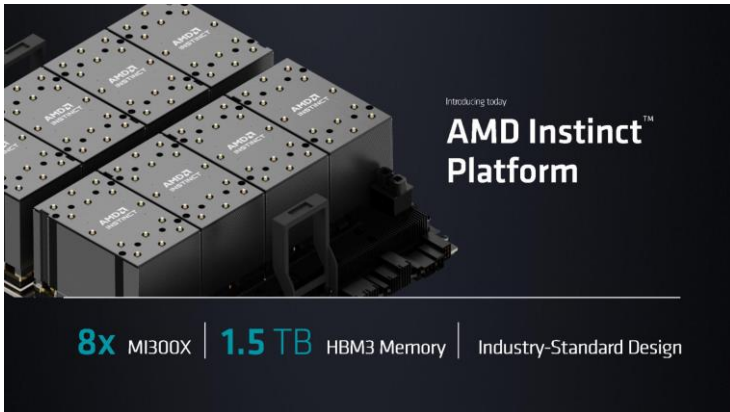
MGX Platforms

CG1, CG2, C2 Systems

AS -8125GS-TNMR2
## MI300X Solution

Specifications

CPU – Dual EPYC 9004 Series processors, up to 256 cores/512 threads	**Memory –** 24x DIMM slots, ECC DDR5 supports up to 4800MHz
Drives – 2x onboard NVMe M.2 12x PCIe5.0 x4 NVMe U.2 (additional optional) 4x PCIe5.0 x4 NVMe U.2 2x SATA 2.5"	**Expansion –** 8x PCIe 5.0 x16 low profile 2x FHFL PCIe 5.0 x16 slots (Optional) 2x PCIe 5.0 x16 slots via additional PCIe switch
System Cooling 5x Front and 5x Rear counter-rotating fans with optimal fan speed control	**Power Supply –** 6x or 8x 3000-watt N+N Redundant Titanium Level Power Supplies
Accelerator Support - 8x MI300X	**Dimensions –** W x H x D 14.0" (H) x 17.2" (W) x 33.2" (D)

80 PLUS TITANIUM

Introducing today
AMD Instinct™ Platform

8x MI300X | **1.5 TB** HBM3 Memory | Industry-Standard Design

Recommend System Configuration:

Item#	Description	Q'ty
AS -8125GS-TNMR2	[NR]H13DSG-OM, CSE-GP801TS-D2 for MI300X	1
PSE-GEN9534-0799	Genoa 9534 DP/UP 64C/128T 2.45G 256M 280W SP5	2
MEM-DR564L-CL01-ER48	64GB DDR5-4800 2RX4 (10X4) LP (16Gb) ECC RDIMM	24
HDS-MMN-MTFDKBA960TFR-15	Micron 7450 PRO 960GB NVMe PCIe 4.0 M.2 22x80mm TCG Opal	2
AOC-CX766003N-SQ0	Nvidia 900-9X766-003N-SQ0 PCIe 1-port IB 400GE OSFP Gen5	8
GPU-AMD-MI300X-OAM-0045H	[NR] AMD Instinct MI300X 192GB 8 OAM + UBB	1
AOC-STGS-I2T-O	Std LP 2-port 10G RJ45, Intel X550 (Retail Pack)	1
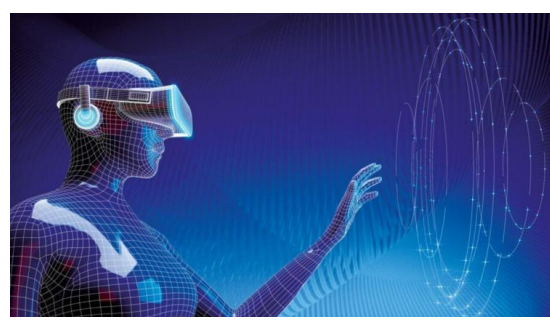
Scalable AI Clusters

The Supermicro Scalable Rack Scale AI Solutions are based on a single rack as a building block, referred to as a Scalable Unit, which can then be expanded to four or eight racks.
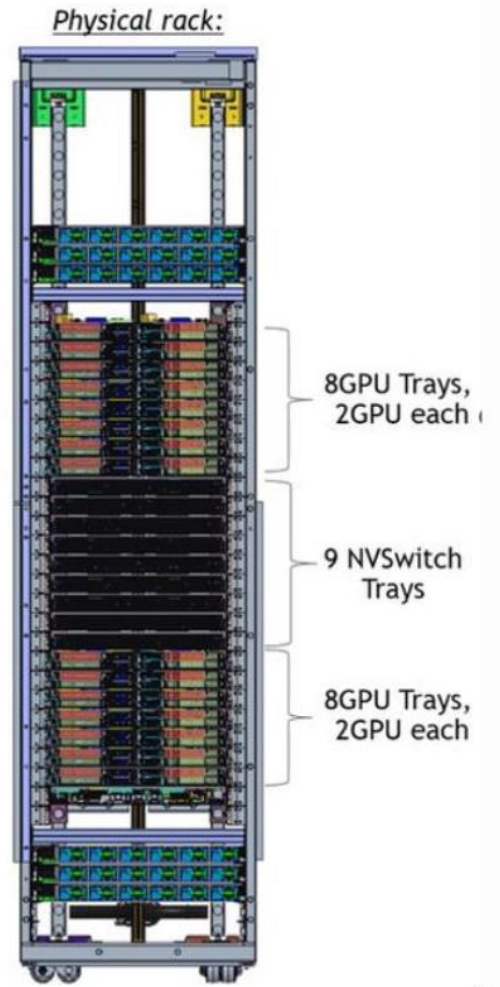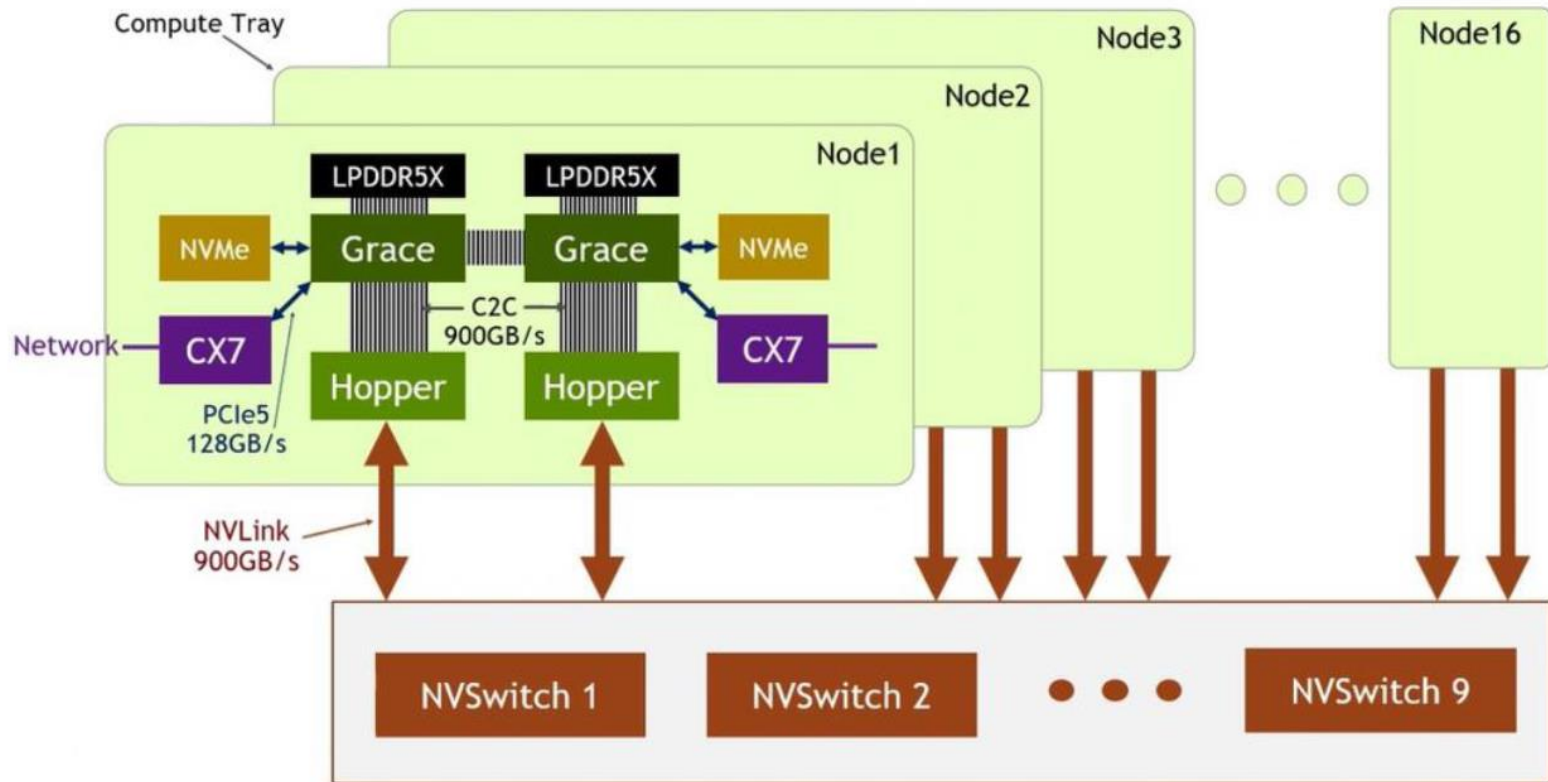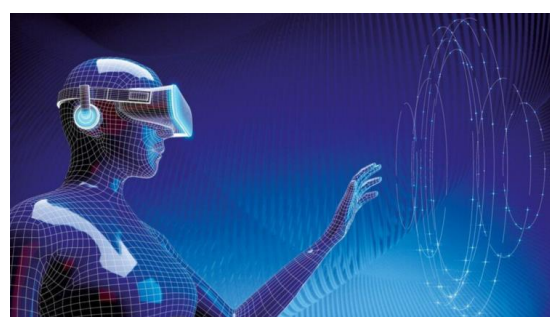

Scalable Unit Base Package

POD

SuperPOD

	SU/Base Package SRS-42UGPU-AI-SU1	POD SRS-42UGPU-AI-SU2	SuperPOD SRS-42UGPU-AI-SU3
GPU Server (8U 8GPU)	4x SYS-821GE-TNHR / 4x AS -8125GS-TNHR	16x SYS-821GE-TNHR / 16x AS -8125GS-TNHR	32x SYS-821GE-TNHR / 32x AS -8125GS-TNHR
Total CPUs	8x Intel® Xeon® Platinum 8480+ Processors or 8x AMD EPYC™ 9004 Processors	32x Intel® Xeon® Platinum 8480+ Processors or 16x AMD EPYC™ 9004 Processors	64x Intel® Xeon® Platinum 8480+ Processors or 64x AMD EPYC™ 9004 Processors
Total GPUs	32x NVIDIA HGX H100 SXM5	128x NVIDIA HGX H100 SXM5	256x NVIDIA HGX H100 SXM5
Rack	1x 42U (Optional 48U)	4x 42U (Optional 48U)	8x 42U (Optional 48U)
Memory	32TB DDR5 (X13) 24TB DDR5 (H13)	128TB DDR5 (X13) 96TB DDR5 (H13)	256TB DDR5 (X13) 192TB DDR5 (X13)
Estimated Total Power Per Rack	Max 45 kW	Max 180 kW	Max 360 kW
Networking	1x 400G 64-port NDR IB: SSE-MQM9700-NS2F	1x 400G 64-port NDR IB: SSE-MQM9700-NS2F	3x 400G 64-port NDR IB: SSE-MQM9700-NS2F
	1x SMC 100G Eth Switch (Storage)	1x SMC 100G Eth Switch (Storage)	1x SMC 100G Eth Switch (Storage)
	1x SMC 1G/25G MGT Switch	1x SMC 1G/25G MGT Switch	2x SMC 1G/25G MGT Switch

REAL AND DIGITAL WORLDS CONVERGENCE

Supermicro OVX Building Block Solution

Rack-scale and a Full Turn-key Solution (L11/L12)
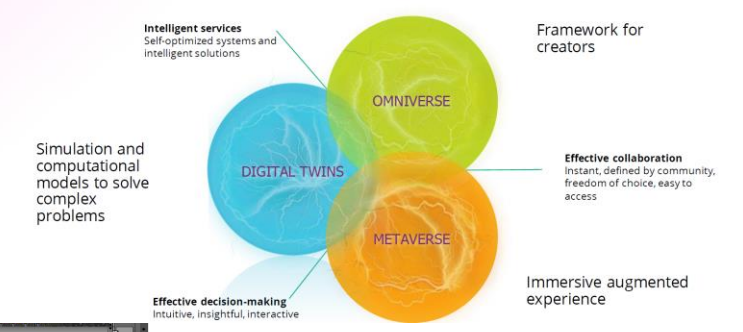
Scalable Unit / Base Package

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
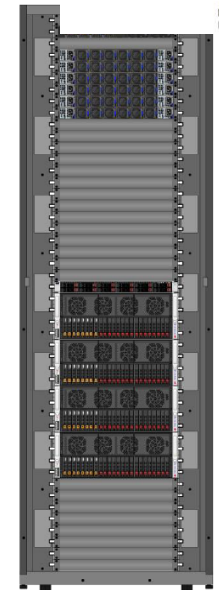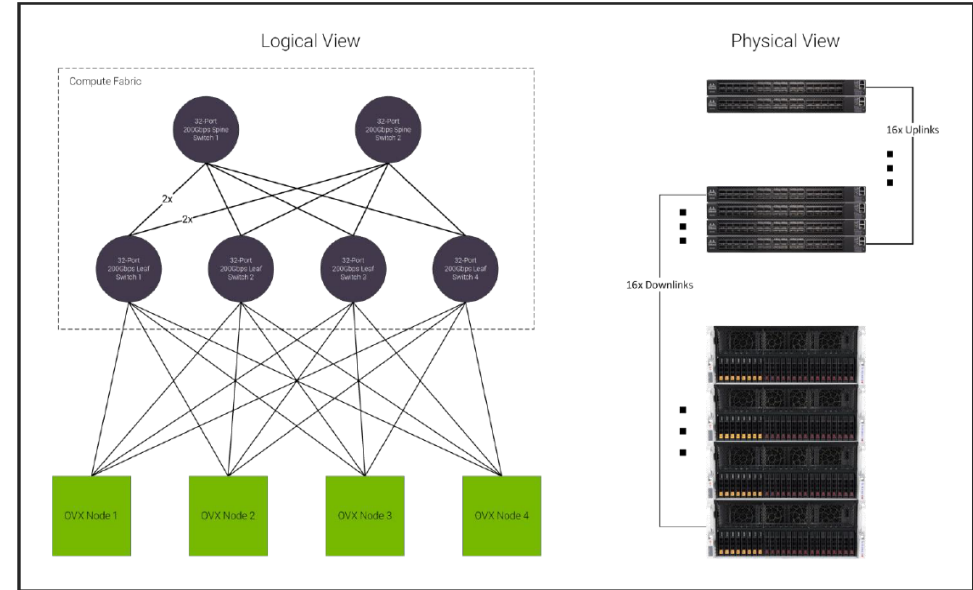
Digital Twins
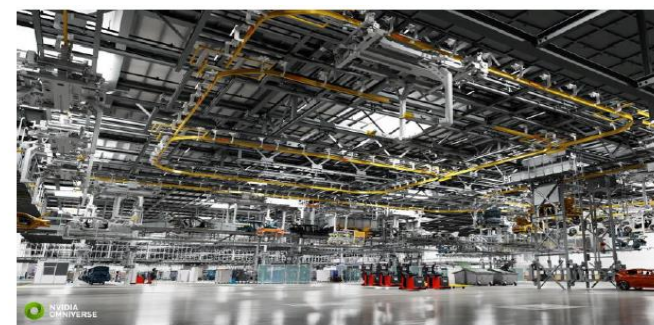
Simulations and Rendering

Design and Collaboration

OLTP/OLAP, Data Analytics…

SAP HANA · **Microsoft SQL Server** · **TimesTen SQL**

MP SuperServer SYS-681E-TR

Key Applications

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

Key Features

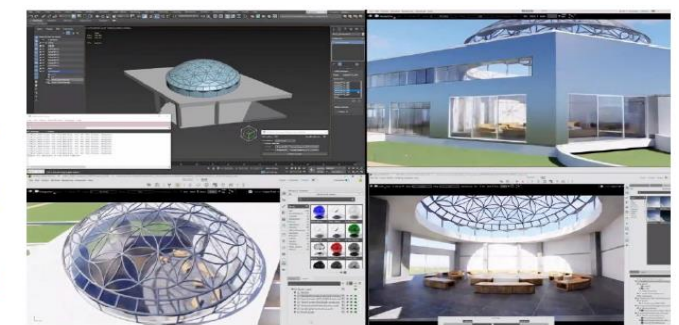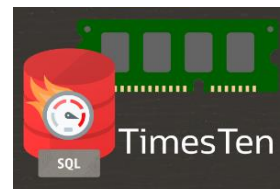- Octa Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors;
- 128 DIMM Slots; Up to 32TB DDR5-4800MHz ECC RDIMM/RDIMM-3DS;
- Optional PCIe configurations up to 24 PCIe slots with support for 12 double-width GPU/Accerlator cards;
- 24x 2.5" Hot-swap NVMe/SAS3/SATA3 drive bays ; 2x internal 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;
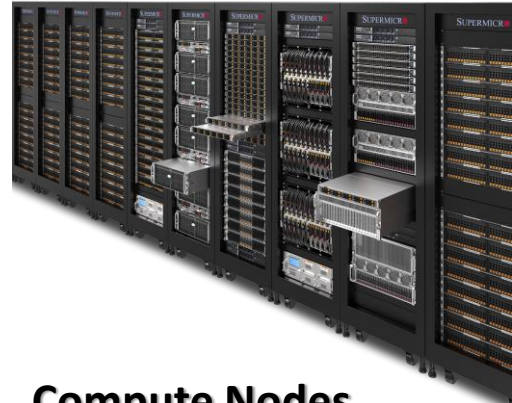
NVIDIA H100 Tensor Core GPU

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

AMD INSTINCT MI250
POWERING DISCOVERIES AT EXASCALE

Media Supercomputer
Arctic Sound - M
Sampling Today   Shipping Mid 2022

75-150W | Xe-HPG | GDDR6 memory

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

Compute Nodes

GPU Nodes

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

SAN / NAS diagram

vSphere / vSAN architecture diagram: Cloud Console, Admin Services (Cross vCenter Visibility), Add-on Services (Disaster Recovery as a Service), vm / APP, vSphere / vSAN, Managed by vCenter, vSAN Shared Storage (SSD)
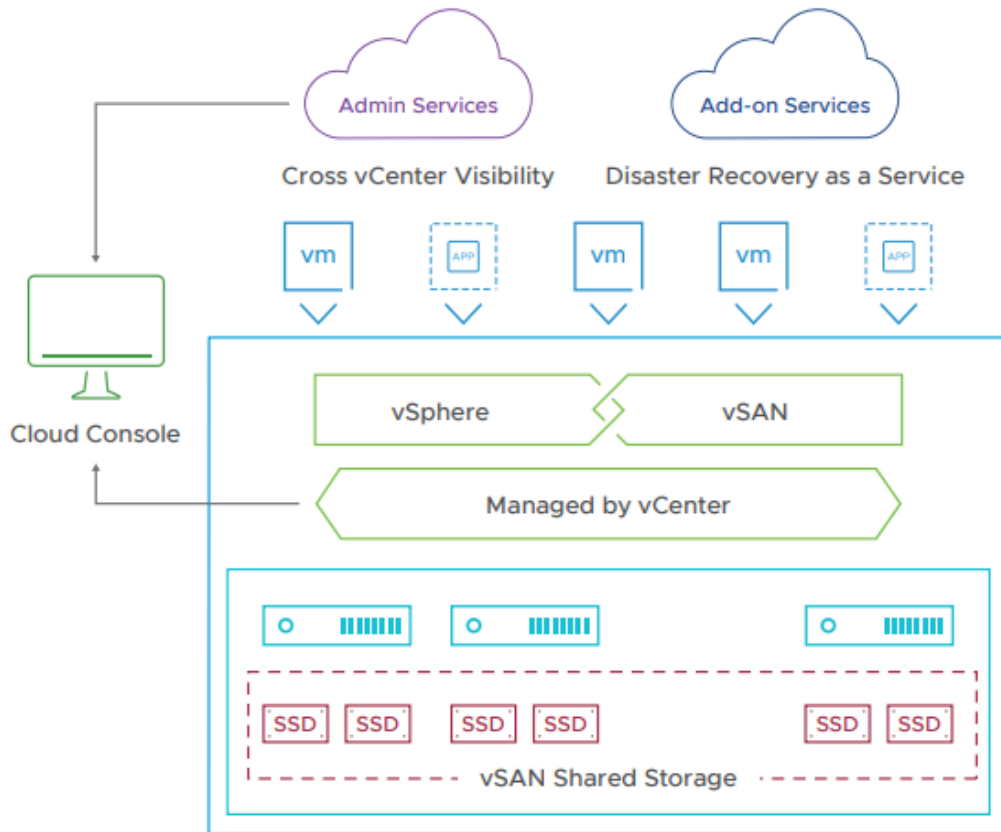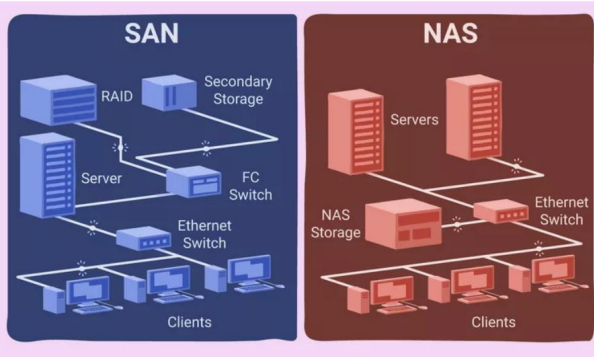
X13 Hyper
Best-in-class Performance and Flexibility Rackmount Server

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

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;

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

Object   **Parallel File**   **Object/File**

Object/File   **Block**

Tiered Storage Reference Architecture

GPU-Enabled Resources

HPC / Compute Grid

Containers & Microservices

Traditional Access Protocols

| GPU Direct Storage | POSIX Client | Kubernetes CSI-Plugin | SMB, NFS, S3 |

10–20% of Storage Capacity

All-Flash HighPerformance Storage Tier

WEKA

80-90% of Storage Capacity

Persistent Storage in Data Lake

On-Premises Object Storage

Cloud-based storage for disaster recovery and business continuity

CLOUDIAN® **Quantum.** **OSNEXUS.** **SCALITY**

Tiered Storage in AI POD

Application Tier

Data Center Connects Through
1/10/25 GbE
Supermicro SSE-G3748R-SMIS Switches

1/10/25 GbE

Supermicro 8U GPU Servers
AS -8125GS-TNHR

All-Flash Tier

Application Access Storage Tier With
Supermicro 400 Gb/s InfiniBand
SSE-MQM9700-NS2F Switches

400 Gb/s InfiniBand

Supermicro Petascale Storage Servers
ASG-1115S-NE316R

Object Tier

Data Migrates to/from Object Tier With
25 or 100 GbE Supermicro
SSE-C4632 or SSE-SN3700 Switches

25 or 100 GbE

Supermicro SuperStorage Servers
SSG-640SP-DE1CR90

Optimized Platform for 5G/Telco Applications
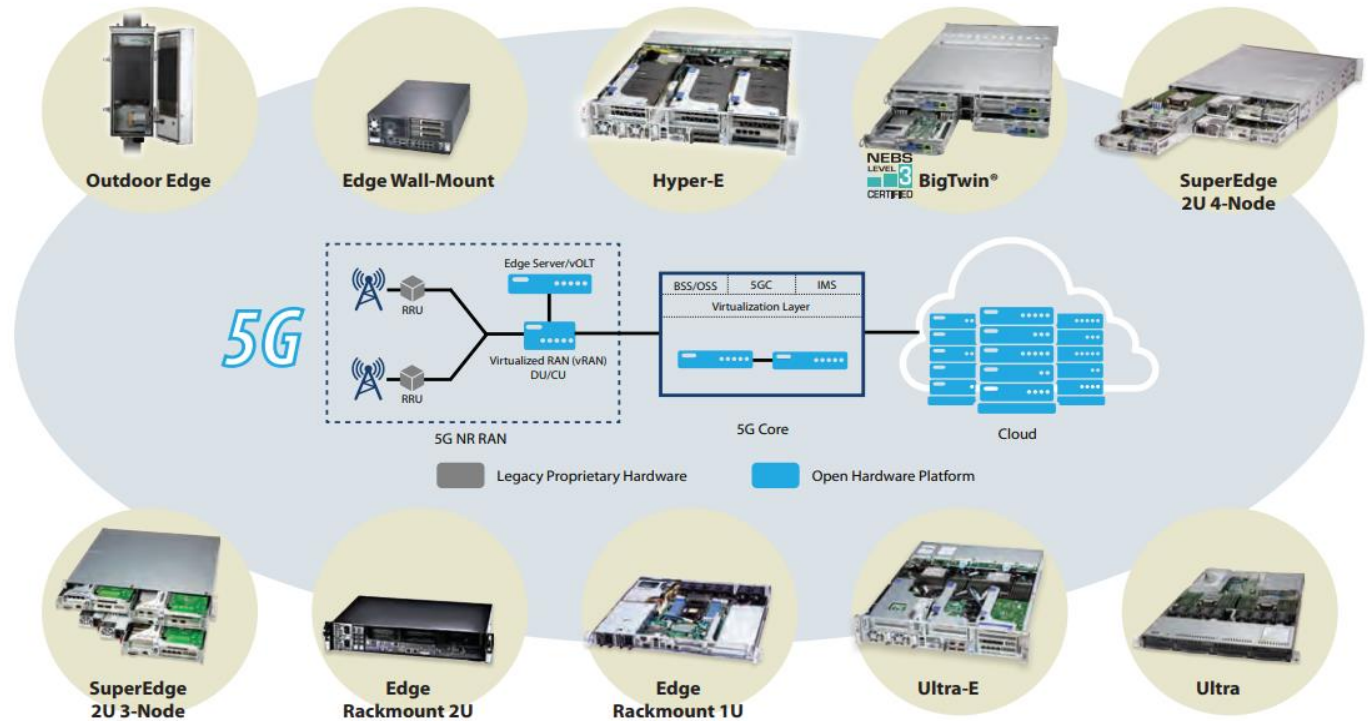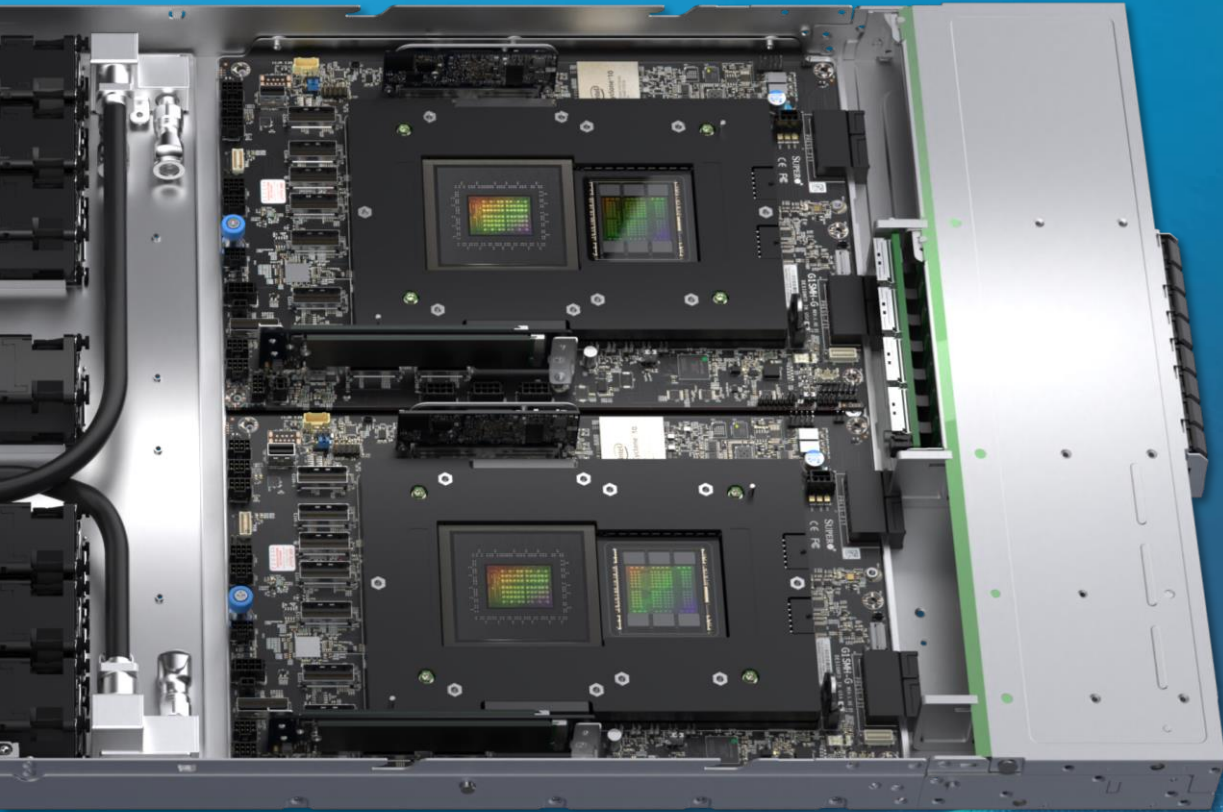
Supermicro NVIDIA MGX Systems
Product Overview

NVIDIA Grace CPU Superchip

- 2x Grace CPUs with attached LPDDR5X on mezzanine module
- 900GB/s NVLink Chip-to-Chip on the module
  - No off-the-module NVLink support

Feature	
Core count	144 Arm Neoverse V2 Cores with 4x128b SVE2
L1 cache	64KB i-cache + 64KB d-cache
L2 cache	1MB per core
L3 cache	234MB
LPDDR5X size	240GB, 480GB and 960GB on-module memory options
Memory bandwidth	Up to 1TB/s
NVIDIA NVLink-C2C bandwidth	900GB/s
PCIe links	Up to 8x PCIe Gen5 x16 option to bifurcate
Module thermal design power (TDP)	500W TDP with memory
Form factor	Superchip module
Thermal solution	Air cooled or liquid cooled
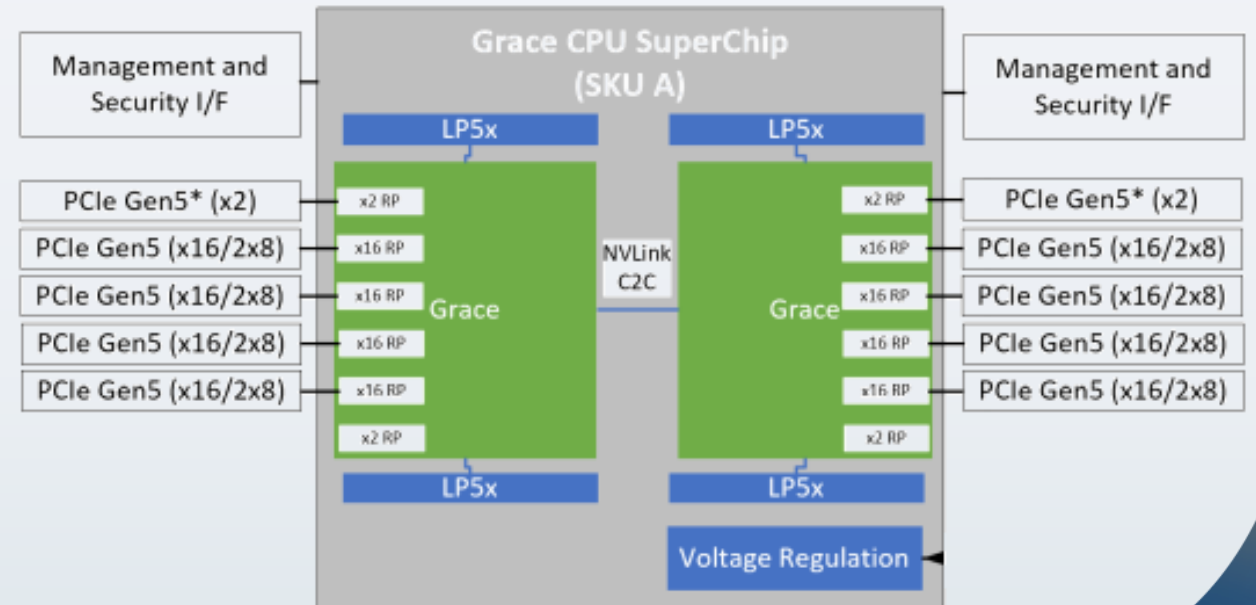
NVIDIA GH200 Grace Hopper Superchip

- One Grace CPU with integrated LPDDR5X and one H100 Tensor Core GPU (Hopper) on mezzanine module
- Fast NVLink-C2C interface between CPU and GPU

| Grace CPU	Feature
CPU core count	72 Arm Neoverse V2 cores
L1 cache	64KB i-cache + 64KB d-cache
L2 cache	1MB per core
L3 cache	117MB
LPDDR5X size	Up to 480GB
Memory bandwidth	Up to 512GB/s
PCIe links	Up to 4x PCIe x16 (Gen5)

Hopper H100 GPU	Feature
FP64	34 teraFLOPS
FP64 Tensor Core	67 teraFLOPS
FP32	67 teraFLOPS
TF32 Tensor Core	989 teraFLOPS* | 494 teraFLOPS
BFLOAT16 Tensor Core	1,979 teraFLOPS* | 990 teraFLOPS
FP16 Tensor Core	1,979 teraFLOPS* | 990 teraFLOPS
FP8 Tensor Core	3,958 teraFLOPS* | 1,979 teraFLOPS
INT8 Tensor Core	3,958 TOPS* | 1,979 TOPS
HBM3 size	Up to 96GB
Memory bandwidth	Up to 4TB/s
NVIDIA NVLink-C2C CPU-to-GPU bandwidth	900 GB/s bidirectional
Module thermal design power (TDP)	Programmable from 450W to 1000W (CPU + GPU + memory)
Form factor	Superchip module
Thermal solution	Air cooled or liquid cooled

HOPPER + HBM3

GRACE + LPDDR5X
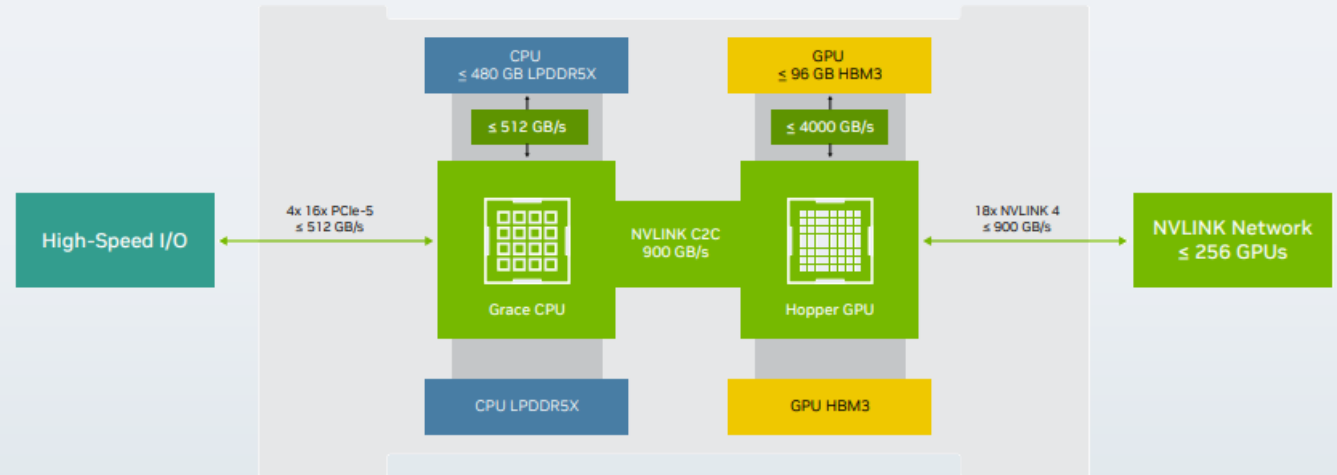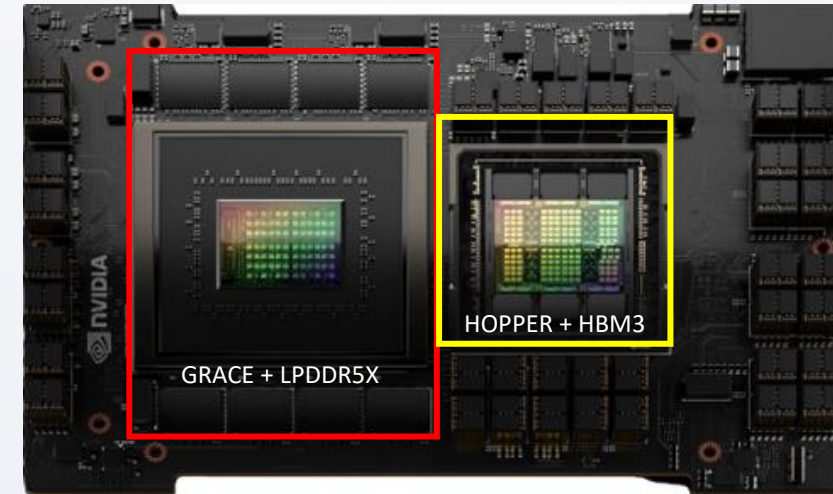
1U Grace Hopper Superchip Systems

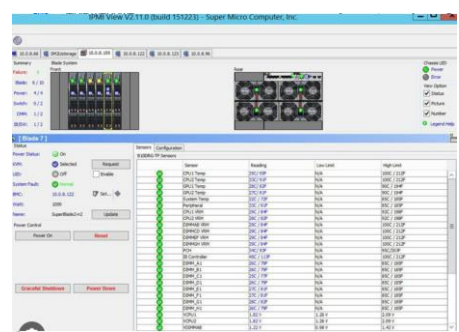|	1U with Grace Hopper	1U with Grace Hopper LC	1U 2-Node with Grace Hopper
Model	**ARS-111GL-NHR**	**ARS-111GL-NHR-LCC**	**ARS-111GL-DNHR-LCC**
CPU	72-core Grace Arm Neoverse V2 CPU + H100 Tensor Core GPU in a single chip	72-core Grace Arm Neoverse V2 CPU + H100 Tensor Core GPU in a single chip	72-core Grace Arm Neoverse V2 CPU + H100 Tensor Core GPU in a single chip per node
Cooling	Air-cooled	Liquid-cooled	Liquid-cooled
GPU Support	NVIDIA H100 Tensor Core GPU with 96GB of HBM3	NVIDIA H100 Tensor Core GPU with 96GB of HBM3	NVIDIA H100 Tensor Core GPU with 96GB of HBM3 per node
Memory	CPU: 480G integrated LPDDR5X with ECC GPU: 96GB HBM3	CPU: 480G integrated LPDDR5X with ECC GPU: 96GB HBM3	CPU: 480G integrated LPDDR5X with ECC per node GPU: 96GB HBM3 per node
Networking	3x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7	3x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7	2x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7
Storage	8x Hot-swap E1.S drives and 2x M.2 NVMe drives	8x Hot-swap E1.S drives and 2x M.2 NVMe drives	4x Hot-swap E1.S drives and 2x M.2 NVMe drives per node
Power Supplies	2x 2000W Titanium Level	2x 2000W Titanium Level	2x 2700W Titanium Level

1U/2U Grace CPU Superchip and x86 Systems

2-Node

	1U 2-Node with Grace CPU	**2U with Grace CPU**	**2U with x86 DP**
Model	ARS-121L-DNR	ARS-221GL-NR	SYS-221GE-NR
CPU	144-core Grace Arm Neoverse V2 CPU in a single chip per node (total of 288 cores)	144-core Grace Arm Neoverse V2 CPU in a single chip	4th or 5th Generation Intel® Xeon® Scalable processors (up to 60-core per socket)
Cooling	Air-cooled	Air-cooled	Air-cooled
GPU Support	Please contact our sales for possible configurations	Up to 4 double-width GPUs including NVIDIA H100 PCIe, H100 NVL, L40S.	Up to 4 double-width GPUs including NVIDIA H100 PCIe, H100 NVL, L40S
Memory	Up to 480GB of integrated LPDDR5X with ECC and up to 1TB/s of memory bandwidth per node	Up to 480GB of integrated LPDDR5X with ECC and up to 1TB/s of memory bandwidth per node	Up to 2TB, 32x DIMM slots, ECC DDR5-4800 DIMM
Networking	3x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7	3x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7	2x PCIe 5.0 x16 slots supporting NVIDIA BlueField-3 or ConnectX-7
Storage	4x Hot-swap E1.S drives and 2x M.2 NVMe drives per node	8x Hot-swap E1.S drives and 2x M.2 NVMe drives	8x Hot-swap E1.S drives and 2x M.2 NVMe drives
Power Supplies	2x 2700W Titanium Level	3x 2000W Titanium Level	3x 2000W Titanium Level

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!

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