



X12/H12 GPU Systems Roadmap

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X12 GPU System Roadmap

Highest Performance and Flexibility for AI/ML and HPC Applications

4U GPU Systems

1U/2U GPU Systems



X12: 4U-8GPU SYS-420GP-TNAR

Integrated Performance, Delta GPU



X12: 4U-10GPU SYS-420GP-TNR

Dual Root Configuration, PCIe GPU



X12: 4U-4GPU SYS-740GP-TNRT

Flexible Solution, PCIe GPU



X12: 2U-4GPU * SYS - 220GQ-TNAR

Scale-able Performance, Redstone GPU



X12: 2U-6GPU * SYS-220GP-TNR

Balanced Solution, PCIe GPU



X12: 1U-4GPU * SYS-120GQ-TNRT

Highest Density, PCIe GPU



X12: 2U- 2Node 3GPU * SYS-210GP-DNR

Flexible Architecture, PCIe GPU

HGX A100 8-GPU (Delta) Server: SYS-420GP-TNAR/+



4U NVIDIA SXM A100 + 8-GPU Intel® Xeon® Scalable CPU System



System Front



System Rear

- **Key Features**

- Supports 8 A100 40GB/80GB SXM4 GPUs
- Platform with NVIDIA® NVLINK™ + NVIDIA® NVSwitch™
- Dual 3rd Gen Intel® Xeon® Scalable Processors



- **Key Applications**

- AI Compute/Model Training/Deep Learning
- High-performance Computing (HPC)



Specifications

<p>CPU – Dual Socket Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP</p>	<p>Memory – 32 DIMM Slots 32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 6 Hot-Swap Bays 6 NVMe U.2 (4 from PCIe Switch & 2 from CPU) 2 NVMe M.2 (Internal) (Option for up to 10 hot-swap U.2 NVMe 2.5" available)</p>	<p>Expansion – 10 PCI-E Slots 8 PCIe 4.0 x16 LP from PCIe switch 2 PCIe 4.0 x16 LP from CPUs AIOM support</p>
<p>I/O ports 1 BMC LAN port 1 VGA port 2 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 4x 3000W High-efficiency (Titanium level) power supply OR 4x 2200W High-efficiency (Titanium level) power supply (3+1)</p>

Subject to change without notice

HGX A100 4-GPU (Redstone) Server: SYS -220GQ-TNAR/+



2U NVIDIA SXM A100 + 4-GPU Intel Platform



- Key Features**

- Supports 4 A100 40GB/80GB SXM4 GPUs
- Direct connect PCI-E Gen 4 Platform with NVIDIA® NVLink™
- Dual Processors



- Key Applications**

- AI Compute/Model Training/Deep Learning
- High-performance Computing (HPC)



System Front

Specifications

CPU – Dual Socket Dual Processors Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP	Memory – 32 DIMM Slots 32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM
Drives – 4 Hot-Swap Bays 4x 2.5" SAS/SATA/NVMe Hybrid	Expansion – 5 PCI-E Slots 4x PCI-E Gen 4 x16 LP 1x PCI-E Gen 4 x8 LP
Networking – Dual 10GbE 2x RJ45 10GbE 1x RJ45 1GbE IPMI	Power Supply – N+N Redundant 2x 2200W Titanium Level 2x 3000W Titanium Level (Coming Soon)

Subject to change without notice

Intel DP 4U 10 GPU System: SYS-420GP-TNR



4U NVIDIA 10- PCIe GPU Intel® Xeon® Scalable CPU System



System Front View



System Rear View

- **Key Features**

- Supports Upto 10 Double Width PCIe GPUs
- Dual 3rd Gen Intel® Xeon® Scalable Processors

- **Key Applications**

- AI Compute/Model Training/Deep Learning (HPC)
- Cloud rendering
- Real-time high quality multi-GPU ray tracing
- High performance simulation of complex 3D



Specifications

<p>CPU – Dual Socket Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP</p>	<p>Memory – 32 DIMM Slots 32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 24 Hot-Swap Bays 16x HOT SWAP 2.5" SATA/SAS 2x M.2 NVMe 8x HOT SWAP 2.5" NVMe</p>	<p>Expansion – 12 PCI-E Slots 12 PCIe 4.0 x16 (FHFL) 10 PCIe GPUs Double Width FHFL AIOM support</p>
<p>I/O ports 1 BMC LAN port 1 VGA port 2 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 4x 2000W High-efficiency (Titanium level) power supply</p>

Subject to change without notice

Intel DP 4U 4 GPU System: SYS-740GP-TNRT



4U NVIDIA 4- PCIe GPU Intel® Xeon® Scalable CPU System



System Rear View

- **Key Features**
 - Supports Upto 4 Double Width GPUs
 - Dual 3rd Gen Intel® Xeon® Scalable Processors
- **Key Applications**
 - AI Compute/Model Training/Deep Learning (HPC)
 - Real-time high quality multi-GPU ray tracing
 - High performance simulation of complex 3D



Specifications

<p>CPU – Dual Socket Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP</p>	<p>Memory – 16 DIMM Slots 16 DIMMs, up to 4TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 8 Hot-swap 3.5" drive bays Up to 8 NVMe drives (4 NVMe drives supported by default) Support 2x M.2 (SATA or NVMe).</p>	<p>Expansion – 7 PCI-E Slots 6 PCI-E Gen 4.0 x16 (4 FHFL & 2 LP) 1 PCI-E 4.0 x8 LP</p>
<p>I/O ports Dual 10GbE ports 1 BMC LAN port 1 VGA port • 6 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 2x 2200W High-efficiency (Titanium level) power supply</p>

Subject to change without notice

Intel DP 1U 4 GPU System: SYS-120GQ-TNRT



1U NVIDIA 4- PCIe GPU Intel® Xeon® Scalable CPU System



System Front View

- **Key Features**
 - Supports Upto 4 Double Width GPUs
 - Dual 3rd Gen Intel® Xeon® Scalable Processors
- **Key Applications**
 - AI Compute/Model Training/Deep Learning
 - High-performance Computing (HPC)



Specifications

<p>CPU – Dual Socket Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 205W TDP</p>	<p>Memory – 16 DIMM Slots 16 DIMMs, up to 4TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 4 x 2.5" drive bays 1x M.2 NVMe Supported (Internal) 2x 2.5" NVMe Hot-swap drive bays 2x 2.5" SATA Internal Fixed drive bays</p>	<p>Expansion – 6 PCI-E Slots 6 PCIe 4.0 x16 (4 FHFL & 2 LP)</p>
<p>I/O ports 1 BMC LAN port 1 VGA port 2 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 2x 2000W High-efficiency (Titanium level) power supply</p>



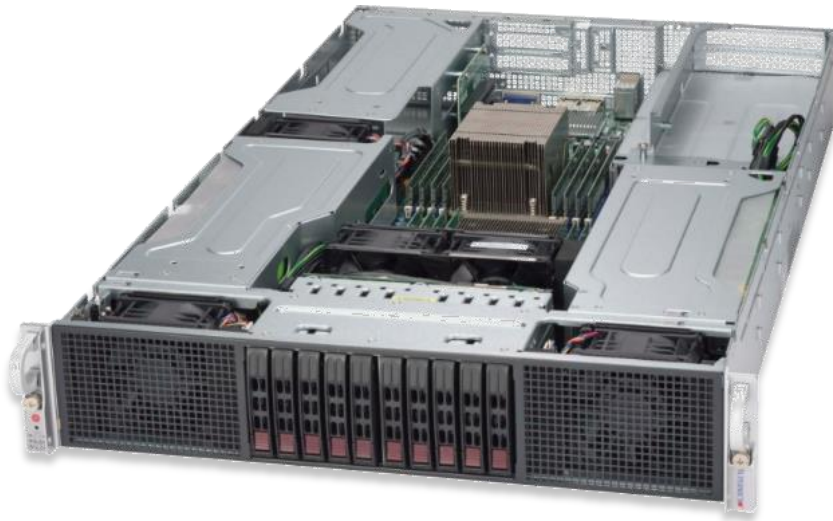
System Rear View

Subject to change without notice

Intel DP 2U 6 GPU System: SYS-220GP-TNR



2U NVIDIA 6- PCIe GPU Intel® Xeon® Scalable CPU System



- **Key Features**
 - Supports Upto 6 Double Width GPUs
 - Dual 3rd Gen Intel® Xeon® Scalable Processors
- **Key Applications**
 - AI Compute/Model Training/Deep Learning (HPC)
 - Virtual Work station
 - Video Conferencing
 - 4K Cloud Games



Specifications

<p>CPU – Dual Socket Dual 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP</p>	<p>Memory – 16 DIMM Slots 16 DIMMs, up to 4TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 10 x 2.5" drive bays Up to 10x 2.5" drive bays Up to 6 NVMe drives 2x M.2</p>	<p>Expansion – 8 PCI-E Slots 6 PCIe 4.0 x16 FHFL 2 PCIe 4.0 x8 LP AIOM support</p>
<p>I/O ports 1 BMC LAN port 1 VGA port 2 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 2x 2600W High-efficiency (Titanium level) power supply</p>

System Rear View



System Front View

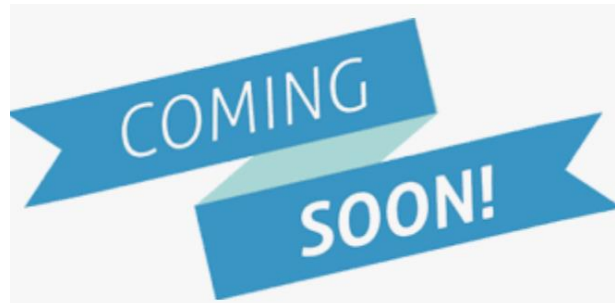


Subject to change without notice

Intel UP 2U 2Node GPU System: SYS-210GP-DNR



2U NVIDIA 3- PCIe GPU Per Node Intel® Xeon® Scalable CPU System



System Front View

Subject to change without notice

Key Features

UP 3rd Gen Intel® Xeon® Scalable Processor
Energy-efficient Resource-saving Architecture



Key Applications

Perfect Platform for Video Streaming
High-End Cloud Gaming



Specifications

<p>CPU – Single Socket (Per Node) Single 3rd Gen Intel® Xeon® Scalable Processors Upto 270W TDP</p>	<p>Memory – 8 DIMM Slots (Per Node) 8 DIMMs, up to 2TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – (Per Node) 2 U.2 NVMe Gen 4.0 (Hot-swap drive bay) 2 M.2 NVMe Gen 3.0 (On-board from PCH) 2 SATA DOM for internal OS drive</p>	<p>Expansion – 3 PCI-E Slots (Per Node) Up to 3 Double Width FHFL AIOM support</p>
<p>I/O ports (Per Node) BMC LAN port 1 VGA port 2 USB 3.0 ports and 1 COM port</p>	<p>Power Supply (Enclosure) 2x 2600W High-efficiency (Titanium level) power supply</p>

H12 GPU System Roadmap

Highest Performance and Flexibility for AI/ML and HPC Applications

SXM GPU Systems

PCIe GPU Systems



H12: 2U-4GPU AS -2124GQ-NART

Scale-able Performance, Redstone GPU



H12: 2U- 2Node 3GPU AS -2114GT-DNR

Flexible Architecture, PCIe GPU



H12: 4U-8GPU AS -4124GO-NART

Integrated Performance, Delta GPU



H12: 4U-8GPU AS -4124GS-TNR

Direct Attach & Low Latency, PCIe GPU

HGX A100 8-GPU (Delta) Server: AS -4124GO-NART+



4U NVIDIA SXM A100 + 8-GPU AMD EPYC CPU System



System Front



System Rear

- **Key Features**

- Supports 8 A100 40GB SXM4 GPUs
- Platform with NVIDIA® NVLINK™ + NVIDIA® NVSwitch™
- Dual AMD EPYC™ Series Processors

- **Key Applications**

- AI Compute/Model Training/Deep Learning
- High-performance Computing (HPC)



Specifications

<p>CPU – Dual Socket Dual AMD EPYC™ 7002/7003 Series (Rome/Milan) Processors Up to 128 Cores, CPU TDP up to 280W</p>	<p>Memory – 32 DIMM Slots 32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM</p>
<p>Drives – 6 Hot-Swap Bays 6 NVMe U.2 (4 from PCIe Switch & 2 from CPU) 2 NVMe M.2 (Internal) (Option for up to 10 hot-swap U.2 NVMe 2.5“ available)</p>	<p>Expansion – 10 PCI-E Slots 8 PCIe 4.0 x16 LP from PCIe switch 1 PCIe 4.0 x16 & 1 PCIe 4.0 x8 LP from CPUs AIOM support</p>
<p>I/O ports 1 VGA port 2 USB 3.0 ports</p>	<p>Power Supply – N+N Redundant 4x 3000W High-efficiency (Titanium level) power supply</p>

Subject to change without notice

HGX A100 4-GPU (Redstone) Server: AS -2124GQ-NART/+



2U NVIDIA SXM A100 + 4-GPU AMD EPYC CPU System



System Front



System Rear

- **Key Features**

- Supports 4 A100 40GB SXM4 GPUs
- Direct connect PCI-E Gen 4 Platform with NVIDIA® NVLink™
- Dual AMD EPYC™ Series Processors

- **Key Applications**

- AI Compute/Model Training/Deep Learning
- High-performance Computing (HPC)



Specifications

CPU – Dual Socket Dual AMD EPYC™ 7002/7003 Series (Rome/Milan) Processors Up to 128 Cores, CPU TDP up to 280W	Memory – 32 DIMM Slots 32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM
Drives – 4 Hot-Swap Bays 4x 2.5" SAS/SATA/NVMe Hybrid	Expansion – 5 PCI-E Slots 4x PCI-E Gen 4 x16 LP 1x PCI-E Gen 4 x8 LP
Networking – Dual 10GbE 2x RJ45 10GbE 1x RJ45 1GbE IPMI	Power Supply – N+N Redundant 2x 2200W Titanium Level 2x 3000W Titanium Level (Coming Soon)

DP 4U 8 GPU Server: AS -4124GS-TNR



4U PCIe Gen 4 AMD EPYC CPU System



System Front



System Rear

- **Key Features**

- Supports 8 PCIe GPUs Double Width FHFL
- Dual AMD EPYC™ Series Processors

- **Key Applications**

- AI Compute/Model Training/Deep Learning
- High-performance Computing (HPC)



Specifications

CPU – Dual Socket

Dual AMD EPYC™ 7002 /7003Series (Rome/Milan) Processors
Up to 128 Cores, CPU TDP up to 280W

Memory – 32 DIMM Slots

32 DIMMs, up to 8TB Registered ECC DDR4 3200MHz SDRAM

Drives – 24 Hot-Swap Bays

24 Hot-swap 2.5" drive bays
4x 2.5" SATA drives
4x 2.5" NVMe drives

Expansion – 11 PCI-E Slots

8 PCIe 4.0 x16 FHFL
3 PCIe 4.0 x8 (1 FHFL & 2 LP)
AIOM support

I/O ports

11 BMC LAN port
1 VGA port
2 USB 3.0 ports

Power Supply – N+N Redundant

4x 2000W High-efficiency (Titanium level) power supply

Subject to change without notice

Coming Soon
Target Q1 21

A+ UP 2U 2Node 3 GPU Server



AS -2114GT-DNR



Front View



Rear View



Key Features:

- 3 Direct Attached GPUs
- PCIe Gen 4.0 AMD Radeon Instinct & Nvidia Enterprise GPUs
- Flexible Architecture
- 4x Hot-swap 8cm counter-rotating cooling fans

Specifications

- 1 Processor Support**
Single EPYC processor (Socket SP3), Up to 64 cores **280W TDP**
- 2 Memory Capacity**
8 DIMM, up to 2TB DDR4 3200 MHz Reg. ECC
- 3 GPU Support slots per node**
3 Double Width GPUs in PCI-E 4.0 x16 slots or
6 Single Width GPUs in PCI-E 4.0 x16 slots
- 4 Expansion slots per node**
6 PCI-E 4.0 x16 FH slots, 1 **AIOM** slot / OCP3.0
- 5 Networking & I/O – per node**
1 Flexible networking via **AIOM**
1 RJ45 Dedicated IPMI LAN port
2 USB 3.0 ports
1 VGA port
- 6 System Management**
IPMI ASPEED AST2600 BMC with dedicated LAN port
- 7 Drive Bays per node**
4 Hot-swap PCI-E Gen4 x4 U.2 drives (2 default at front, 2 optional at rear)
2 PCI-E Gen4 x4 M.2 connectors
- 8 System Cooling**
4x Heavy duty 8cm PWM fans
- 9 Power Supply**
2600W 1+ 1 High-efficiency (Titanium level, 96%) supplies
- 10 Dimensions**
17.25" (W) x 3.47" (H) x 29.9" (D)

DISCLAIMER

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