

GPU SuperServer SYS-420GU-TNXR (Complete System Only)

NEW

Universal 4U Dual Processor (Intel) GPU System with NVIDIA HGX™ A100 4-GPU SXM4 board, NVLINK™ GPU-GPU Interconnect, and Redundant 3000W Titanium Level Power Supplies.



Key Applications

- High Performance Computing
- AI/Deep Learning Training

Key Features

1. Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors

2. Intel® C621A Chipset

3. 32 DIMM Slots;
Up to 8TB DRAM;
Up to 12TB Intel® Optane™ Persistent Memory;
3200/2933/2666 ECC DDR4 LRDIMM;RDIMM;
Intel® Optane™ Persistent Memory 200 series

4. 10 PCI-E Gen 4.0 X16 LP Slots
4U system with NVIDIA® HGX™ A100 4-GPU
AIOM/OCP 3.0 Support(Optional)
Highest GPU communication using NVIDIA® NVLINK™
Supports HGX A100 4-GPU 40GB (HBM2) or 80GB (HBM2e)

5. Flexible networking options

6. 10x 2.5" Hot-swap NVMe/SATA/SAS drive bays
2 M.2 NVMe/SATA via Intel® C621A PCH chipset (for boot drive only)

7. 4x 3000W redundant Titanium level power supplies

Specifications

Product SKUs

- SYS-420GU-TNXR**
 - SuperServer SYS-420GU-TNXR (Black Front & Silver Body)

Motherboard

Super X12DGPU

Processor

- CPU**
 - Dual Socket P+ (LGA-4189)
 - 3rd Gen Intel® Xeon® Scalable processors
 - Support CPU TDP 270W

- Cores**
 - Up to 40C/80T; Up to 60MB Cache

GPU

- Supported GPU**
 - HGX A100 4-GPU SXM4 Multi-GPU Board

- CPU-GPU Interconnect**
 - PCI-E 4.0 x16 CPU-to-GPU Interconnect

- GPU-GPU Interconnect**
 - NVIDIA® NVLink™

System Memory

- Memory**
 - Memory Capacity: 32 DIMM slots
 - Up to 8TB: 32x 256 GB DRAM
 - Up to 12TB: 16x 512 GB PMem
 - Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM/LRDIMM
 - Intel® Optane™ persistent memory 200 series

- Memory Voltage**
 - 1.2 V

- Error Detection**
 - ECC

On-Board Devices

- SATA**
 - SATA3 (6Gbps); RAID 0/1/5/10 support

- Chipset**
 - Intel® C621A

- Network Connectivity**
 - 2x 10GbE BaseT with Intel® X550-AT2

- IPMI**
 - Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output

- Video**
 - 1 VGA port(s)

System BIOS

- BIOS Type**
 - AMI 32MB SPI Flash EEPROM

Chassis

- Form Factor**
 - 4U Rackmount

- Model**
 - CSE-458GTS-R3K06P

- Note**
 - *5U with 1U height module kit.

Dimensions and Weight

- Height**
 - 6.91" (175.6mm)

- Width**
 - 17.67" (449mm)

- Depth**
 - 32.79" (833mm)

- Package**
 - 14.57" (H) x 27.55" (W) x 49.6" (D)

- Weight**
 - Net Weight: 166 lbs (75.3 kg)
 - Gross Weight: 225 lbs (102.1 kg)

- Available Color**
 - Black Front & Silver Body

Front Panel

- Buttons**
 - Power On/Off button
 - System Reset button

- LEDs**
 - Hard drive activity LED
 - Network activity LEDs
 - Power status LED
 - System Overheat & Power Fail LED

Expansion Slots

- PCI-Express (PCI-E)**
 - Slot 1: PCI-E 4.0 x16 LP
 - Slot 2: PCI-E 4.0 x16 LP
 - Slot 3: PCI-E 4.0 x16 LP
 - Slot 4: PCI-E 4.0 x16 LP
 - Slot 5: PCI-E 4.0 x16 LP
 - Slot 6: PCI-E 4.0 x16 LP
 - Slot 7: PCI-E 4.0 x16 LP
 - Slot 8: PCI-E 4.0 x16 LP
 - Slot 9: PCI-E 4.0 x16 LP
 - Slot 10: PCI-E 4.0 x16 LP

- Note**
 - *8 PCI-E 4.0 slots in 4U. 2 additional PCI-E 4.0 slots in 5U with 1U height module kit supporting 2 AIOM cards.

Drive Bays / Storage

- Hot-swap**
 - 10x 2.5" hot-swap NVMe/SATA/SAS drive bays

- M.2**
 - 2 M.2 NVMe OR 2 M.2 SATA3

System Cooling

- Fans**
 - 5 removable heavy-duty Fan(s)

Power Supply

4x 3000W Redundant Power Supplies, Titanium Level

- Dimension (W x H x L)**
 - 106.5 x 82.1 x 245.3 mm

Management

- Software**
- OOB Management Package (SFT-OOB-LIC)
 - Redfish API
 - IPMI 2.0
 - SSM
 - Intel® Node Manager
 - SPM
 - KVM with dedicated LAN
 - SUM
 - NMI
 - Watch Dog
 - SuperDoctor® 5

- Power Configurations**
- ACPI Power Management
 - Power-on mode for AC power recovery

PC Health Monitoring

- CPU**
- 7 +1 Phase-switching voltage regulator
 - Monitors for CPU Cores, Chipset Voltages, Memory

- FAN**
- Fans with tachometer monitoring
 - Pulse Width Modulated (PWM) fan connectors
 - Status monitor for speed control

- Temperature**
- Monitoring for CPU and chassis environment
 - Thermal Control for fan connectors

Output Type ▪ Backplanes (connector)

Certification



Titanium Level

[[Test Report](#)]

Operating Environment

- Environmental Spec.**
- Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)
 - Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)
 - Operating Relative Humidity: 8% to 90% (non-condensing)
 - Non-operating Relative Humidity: 5% to 95% (non-condensing)

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12DGU	1	Super X12DGU Motherboard
	CSE-458GTS-R3K06P	1	4U Chassis
Add-on Card / Module	AOM-PCIE4-SXM4-Q-P	1	PCIe Transition board for nVidia, Redstone, GPU module,RoHS
Backplane	BPN-SAS3-LB16A-N10	1	1U 10-Slot SFF Hybrid Backplane Supports 10xSAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 2x(1x4) + 1x(2x2) Power Connectors
Cable 1	CBL-0223L	4	BLADE PWS POWER CORD C-19 TO C-20, PBF
Cable 2	CBL-PWEX-1096-43	1	Surlok 5.7MM and RA-PD 3.6MM harness,Left Exit,4AWG,43.
Air Shroud	MCP-310-45801-0B	1	Black Plastic Motherboard Air Shroud for CSE-458G
Riser Card	RSC-G-66G5S	2	1U LHS GPU Riser card with two PCI-E 5.0 X16 slots,HF,Ro
Riser Card	RSC-GR-66G5S	2	1U RHS GPU Riser card with two PCI-E 5.0 X16 slots,HF,Ro
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
*Power Supply	PWS-3K06G-2R	4	AC-DC 3000W, Titanium efficiency, DC output: 54Vdc/45A
*Power Distributor	PDB-PT458G-48	1	Input 4 powers with 54V and 12V also 12Vsb pass through boar
*FAN 1	FAN-0219L4-1	5	80x80x80 mm, 14.2K-15K RPM Counter-rotating, Hot-swappable F
*Drive Tray(s)	MCP-220-00167-0B	10	Gen 3 2.5-inch Tool-less NVMe drive tray (clip design),RoHS
*Rail Set	MCP-290-00057-0N	1	Rail set, quick/quick, default for 4U 17.2" W

Notes:

- Parts with * are inside the chassis
- Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List

	Part Number	Qty	Description
Extra 1U (for 5U w/AIOM or 5U PCI-E)	MCP-460-45801-0N	-	1U height module kit for CSE-458G
Global Services & Support	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
MI250 GPU Kit	CBL-MCIO-1278F4-85	2	MCIO X16,124p to 2 SlimSAS X8,78/78cm, FFC, 30AWG
	CBL-MCIO-1278F3-85	2	MCIO X16,124p to 2 SlimSAS X8,78/78cm, FFC, 30AWG
	CBL-MCIO-1278F2-85	2	MCIO X16,124p to 2 SlimSAS X8,78/78cm, FFC, 30AWG
	CBL-MCIO-1278F1-85	2	MCIO X16,124p to 2 SlimSAS X8,78/78cm, FFC, 30AWG
	CBL-PWEX-1280	2	Microfit,(2X5 to 2X5),PH3.0,53CM,54V,9A/pin,16AWG
	MCP-240-45801-0N	1	Metal stiffener bracket for MI200 UBB assembly
	GPU-AMDMI250-OAM-0029H	4	AMD Instinct MI250 OAM 64GBx2 530W HBM2e PCIe Gen5
	MCP-310-45802-0B	1	Black 4pcs mylar airshroud kit for MI200 installion in CSE-458G
Required Kit for 5U PCI-E	CBL-MCIO-1208L5-X	2	(MCIO to SlimSASLP) x8,STR,8CM,G5,32AWG,85Ohm
	CBL-MCIO-1208L5-J	2	MCIO to SlimSASLP) x8,STR,8CM,G5,32AWG,85Ohm
	RSC-G-6G5	2	1U LHS GPU Riser card with one PCI-E 5.0 X16 slot
	CBL-PWEX-0973-30	2	(MicroFit 2x4 to MicroHi 2x2),PH3.0,30cm,9A/p,18AWG
Required Kit for 5U	AOM-AIOM-2X8-P	2	AIOM Board (cable solution)

w/AIOM	CBL-SAST-1245LP-85	4	SlimSASLP (x8 STR to x8 STR),43CM,85 OHM
	CBL-OTHR-1117	2	2x15,PH1.0 to 2x15,PH1.0,28AWG,30CM,1A/pin
	CBL-PWEX-1099-34	1	FLAT,IDC 2X11F/P1.27 TO IDC 2X11F/P1.27,NCSI,0.5A,35CM
Software	<u>SFT-DCMS-Single</u>	-	DataCenter Management +A17:D53Package (per node license)