

Specifications

Product SKUs

- SYS-420GP-TNR** ■ SuperServer SYS-420GP-TNR (Black Front & Silver Body)

Motherboard

- Super X12DPG-OA6**

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 8-GPU 40GB/80GB SXM4 Multi-GPU Board

- CPU-GPU Interconnect** ■ PCI-E 4.0 x16 Switch Dual-Root

- GPU-GPU Interconnect** ■ PCI-E

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 1GbE BaseT with Intel® I350

- 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

Management

Chassis

- Form Factor** ■ 4U Rackmount

- Model** ■ CSE-418G2TS-R4016BP

Dimensions and Weight

- Height** ■ 7" (178mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 29" (737mm)

- Package** ■ 26.57" (H) x 27" (W) x 41" (D)

- Weight** ■ Net Weight: 65.5 lbs (29.7 kg)
 ■ Gross Weight: 100 lbs (45.3 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 FHFL
 ■ Slot 2: PCI-E 4.0 x16 FHFL
 ■ Slot 3: PCI-E 4.0 x16 FHFL
 ■ Slot 4: PCI-E 4.0 x16 FHFL
 ■ Slot 5: PCI-E 4.0 x16 FHFL
 ■ Slot 6: PCI-E 4.0 x16 FHFL
 ■ Slot 7: PCI-E 4.0 x16 FHFL
 ■ Slot 8: PCI-E 4.0 x16 FHFL
 ■ Slot 9: PCI-E 4.0 x16 FHFL
 ■ Slot 10: PCI-E 4.0 x16 FHFL
 ■ Slot 11: PCI-E 4.0 x16 FHFL
 ■ Slot 12: PCI-E 4.0 x16 FHFL

Drive Bays / Storage

- Hot-swap** ■ 24x 2.5" hot-swap NVMe/SATA/SAS drive bays (8x 2.5" NVMe dedicated)

- M.2** ■ 2 M.2 NVMe OR 2 M.2 SATA3

System Cooling

- Fans** ■ 8 heavy duty fans with optimal fan speed control

Power Supply

4x 2000W Redundant Power Supplies, Titanium Level

- Dimension (W x H x L)** ■ 73.5 x 40 x 203 mm

- 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

- AC Input**
- 1000W: 100-127Vac / 50-60Hz
 - 1800W: 200-220Vac / 50-60Hz
 - 1980W: 220-230Vac / 50-60Hz
 - 2000W: 220-240Vac / 50-60Hz
 - 2000W: 230-240Vac / 50-60Hz
 - 2000W: 230-240Vdc

- +12V**
- Max: 83A / Min: 0A (100Vac-127Vac)
 - Max: 150A / Min: 0A (200Vac-220Vac)
 - Max: 165A / Min: 0A (220Vac-230Vac)
 - Max: 166A / Min: 0A (230Vac-240Vac)

- 12V SB**
- Max: 3.5A / Min: 0A

- Output Type**
- Backplanes (gold finger)

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-X12DPG-OA6	1	Super X12DPG-OA6 Motherboard
	CSE-418G2TS-R4016BP	1	4U Chassis
Add-on Card / Module	AOM-PCIE4-418P-1-P	1	GPU board for 4U PCIE GPU system,HF,RoHS
Add-on Card / Module	AOM-PIO-I2G	1	AOM-PIO-I2G
Backplane	BPN-NVME4-216N-S24	1	2U 24-slot all-hybrid direct-attached backplane, support 24x 2.5" NVME Gen4 / SAS / SATA storage devices.,RoHS
Cable 1	CBL-PWCD-0900	4	PWCD,US/EU/Canada/China/Australia,IEC60320 C14 TO C13,4FT,17
Cable 2	CBL-PWEX-0925	2	2x4,P3.0 to 2x4,P4.2,YL/RED,9.5A,55cm,16AWG,RoHS
Cable 3	CBL-PWEX-0929	1	2x4,PH4.2 to MicroFit,2x4,PH3,YL/RED,9.5A/pin,80CM,16AWG
Cable 4	CBL-PWEX-1028	10	GPU,2x4F/CPU to 2x4F/CPU,P4.2, 30CM,16AWG, 10A/pin, -40~105C
Cable 5	CBL-PWEX-1080	1	Mini-Fit 2x2 F, to Mini-Fit 2x2 F, 10A/pin,7cm,16AWG,RoH
Cable 6	CBL-SAST-1215-85	4	Slimline x8 (STR) to Slimline x8 (STR),INT,15CM,85 OHM,
Cable 7	CBL-SAST-1231-85	6	Slimline x8 (STR) to Slimline x8 (STR),INT,30CM, 85 OHM
Cable 8	CBL-SAST-1235-85	6	Slimline x8 (STR) to Slimline x8 (STR),INT,35CM,85 OHM
Cable 9	CBL-SAST-1244-85	2	Slimline x8 (STR) to Slimline x8 (STR),45CM,85 OHM,RoHS
Cable 10	CBL-SAST-1266-100	2	Slimline x4 (STR) to Slimline x4 (STR) x4,INT 66CM,100
Drive Tray(s)	MCP-220-00047-0B	16	Black gen 3rd hot-swap 2.5inch HDD tray
Drive Tray(s)	MCP-220-00167-0B	8	Gen 3 2.5-inch Tool-less NVMe drive tray (clip design),RoHS
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0080AP4	2	4U Active CPU Heat Sink for X12 Generation DP Workstations and 4U Servers
*Power Supply	PWS-2K08A-1R	4	1U 2000W 100-240VAC Titanium Ultra power supply 73.5x40x203mm
*Cable 11	CBL-0071L	1	ROUND 16 TO 16 PIN RIBBON FP CABLE 30"L, LF
*Cable 12	CBL-OTHR-0794	1	VGA,DB 15pin,F to 2x8,PH2.54,10CM,30 AWG,RoHS
*Cable 13	CBL-PWEX-1069	8	PWEX,FAN,1X4/P2.5 TO 1X4/P2.54,30CM,22AWG,5A/pin,RoHS
*FAN 1	FAN-0199L4-1	8	92x92x38 mm, 11.5K RPM Cooling fan w/ 5A Fan Connector,RoHS
*Front Panel	FPB-TMP-002	1	Thermal Sensor board with 40cm I2C cable
*Drive Tray(s)	MCP-220-21602-0B	3	Black 2.5"; HDD dummy cover for SC213,216 (8 HDD Hex hole)
*Rear Window	MCP-240-84802-0N	1	21 slot rear window for SC418X
*Parts	MCP-260-41802-0N	1	IO shield for X12DPG-OA in SC418G
*Front Panel	MCP-280-82601-0N	1	Front control board adapter (TB826) for SC216,826,936,846
*Rail Set	MCP-290-00057-0N	1 set	Rail set, quick/quick, default for 4U 17.2" W
*Rail Set	MCP-290-00060-0N	1	Threaded rail adapter default for round hole rack
*Rail Set	MCP-290-00115-0N	1	Inner rail, quick-release type
*Rail Set	MCP-290-00117-0N	1	Outer rail, quick-release type

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

2.5" NVMe Drive Trays	MCP-220-00167-0B • eStore	1 per drive	Black Gen-3 2.5" NVMe drive tray. Orange tab with lock. Tool-less.
	MCP-220-00121-0B • eStore	1 per drive	Black Gen-3 2.5" NVMe drive tray. Orange tab with lock.
2.5" SATA Drive Trays	MCP-220-00047-0B • eStore	1 per drive	Black gen 3rd hot-swap 2.5inch HDD tray
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
GPU Cables	CBL-PWEX-0665 • eStore	1 per GPU	GPU power cable. 8 pin FEMALE CPU BLUE to 8 pin FEMALE 20CM. 20AWG/16AWG. For NVIDIA A10 , NVIDIA A4000 ,NVIDIA A5000
GPU Cables (* 10 qty. included with each system.)	CBL-PWEX-1028 • eStore *	1 per GPU	GPU power cable. 8 pin FEMALE CPU BLUE to 8 pin FEMALE CPU BLUE. 30CM. 16AWG. For NVIDIA A100 40GB, NVIDIA A100 80GB, NVIDIA A16, NVIDIA A30, NVIDIA A40
GPU Dummy Tray	MCP-240-00096-0N	1	GPU / Add-on Card Dummy Assembly (2 Slots)
Network and Cables	MCX653106A-HDAT	1	Mellanox ConnectX-6 VPI 200Gb/s InfiniBand & Ethernet Adapter Card dual ports, QSFP56 PCIe 3.0/4.0 x16. HF, RoHS
	MCX653105A-ECAT	1	Mellanox MCX653105A-ECAT PCIe 1-port IB-HDR100 & 100GbE QSFP56 Gen3.0/4.0 x16 CX-6 VPI. HF, RoHS.
	AOC-S25G-M2S	1	2 Port 25 Gigabit SFP28 PCI-E X8 Ethernet card. Based on Mellanox ConnectX-4 LX EN
	<u>AOC-ATG-i2TM</u>	1	AIOM 2-port 10GBase-T RJ45, Intel X550,RoHS
	CBL-NTWK-0942-MQ28C30M	1	ETHERNET,QSFP28,100GbE,PASSIVE,LSZH,3m,Mellanox
	AOC-ATG-i4S	1	AIOM Quad-Port 10GbE SFP+, based on Intel XL710-BM1,RoHS
	CBL-NTWK-0942-MQ28E50M	1	InfiniBand, EDR, QSFP28,100GbE,PASSIVE, 28 AWG, 5M, Mellanox,RoHS
	AOC-ATG-i2S	1	AIOM Dual-Port 10GbE SFP+, based on X710-BM2,RoHS
	CBL-NTWK-0942-MQ28E20M	1	InfiniBand, EDR, QSFP28, 100GbE, PASSIVE, 28 AWG, 2M, Mellanox,RoHS
Note	*** Requires BKT-BBU-BRACKET-05	-	-
	** Requires x1 CBL-SAST-1281-100	-	-
	* Requires x2 CBL-SAST-1281-100	-	-
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
Storage Control Cards and Cables	<u>AOC-S3808L-L8IT</u> **	1	8 int 12Gb/s SAS3 ports, x8 Gen4, HBA - LP, 122 HDD w/ exp,RoHS
	<u>AOC-S3916L-H16IR-32DD</u> *	1	16 int 12Gb/s ports, x8 Gen4, ROC - LP, 32 HDD w/ exp,RoHS
	BKT-BBU-BRACKET-05	1	Remote Mounting Board for Supercap / Cache Vault. Occupies single PCIE SLOT.
	BTR-CVPM05 ***	1	Supermicro Broadcom CACHEVAULT FOR AOC-S3916L-H16IR
	CBL-SAST-1281-100	1	Slimline x8 (STR) to 2x Slimline x4 (STR),80CM,100 OHM,