

GPU SuperWorkstation 7049GP-TRT



Integrated Board



Super X11DPG-QT

**Views: | [Angled View](#) | [Top View](#) |
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Key Features

1. Dual Socket P (LGA 3647) support
2nd Gen Intel® Xeon® Scalable
processors (Cascade Lake/Skylake)[‡]
2. 16 DIMMs; up to 4TB 3DS ECC
DDR4-2933MHz[†] RDIMM/LRDIMM,
Supports Intel® Optane™ DCPMM^{††}
3. 4 PCI-E 3.0 x16 (double-width) slots,
2 PCI-E 3.0 x16 (single-width) slots,
1 PCI-E 3.0 x4 (in x8) slot
4. 8 Hot-swap 3.5" drive bays
5. 2x 10GBase-T LAN ports
6. 1 VGA, 2 COM, 5 USB 3.0
7. 4 Heavy duty fans, 4 exhaust fans,
and 2 active heatsink with optimal
fan speed control
8. 2200W Redundant Power Supplies
Titanium Level (96%)
9. GPU Kit for passive GPU support
(MCP-320-74702-0N-KIT)

Note: Image above may show a varied configuration of optional parts.
Please refer to parts list for standard parts included.

Specifications

Product SKUs

- SYS-7049GP-TRT**
 - SuperServer 7049GP-TRT (**Black**)

Motherboard

Super X11DPG-QT

Processor/Cache

- CPU**
 - Dual Socket P (LGA 3647)
 - 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡], 3 UPI up to 10.4GT/s
 - Support CPU TDP 70-205W

- Cores**
 - Up to 28 Cores

- Note**
 - [‡] BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)

- GPU Support**
 - Please refer to: [Compatible GPU list](#)

System Memory

- Memory Capacity**
 - 16 DIMM slots
 - Up to 4TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM
 - Supports Intel® Optane™ DCPMM^{††}

- Memory Type**
 - 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM

- Note**
 - [†] 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro
 - ^{††} Cascade Lake only. Contact your Supermicro sales rep for more info.

On-Board Devices

- Chipset**
 - Intel® C621 chipset

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

- Network Controllers**
 - Intel® X550 Dual Port 10GBase-T
 - Virtual Machine Device Queues reduce I/O overhead
 - Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output

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

- Graphics**
 - ASPEED AST2500 BMC

Input / Output

- SATA**
 - 10 SATA3 (6Gbps) ports

- LAN**
 - 2 RJ45 10GBase-T ports
 - 1 RJ45 Dedicated IPMI LAN port

- USB**
 - 5 USB 3.0 ports (2 rear, 2 via header, 1 Type A)
 - 4 USB 2.0 ports (2 rear, 2 via headers)

- Video**
 - 1 VGA port

Chassis

- Form Factor**
 - 4U Rackmountable / Tower
 - Optional Rackmount Kit

- Model**
 - CSE-747BTS-R2K20BP**

Dimensions and Weight

- Height**
 - 18.2" (462mm)

- Width**
 - 7.0" (178mm)

- Depth**
 - 26.5" (673mm)

- Package**
 - 27" (H) x 13" (W) x 38" (D)

- Weight**
 - Net Weight: 46 lbs (20.9 kg)
 - Gross Weight: 62 lbs (28.1 kg)

- Available Colors**
 - Dark Gray

Front Panel

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

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

- Ports**
 - 2 Front USB 3.0 Ports

Expansion Slots

- PCI-Express**
 - 4 PCI-E 3.0 x16 (double-width) slots
 - 2 PCI-E 3.0 x16 (single-width) slots
 - 1 PCI-E 3.0 x4 (in x8 slot)

Drive Bays / Storage

- Hot-swap**
 - 8 Hot-swap 3.5" drive bays
 - Optional 4x 2.5" NVMe supported

- M.2**
 - 1 NVMe based M.2 SSD
 - Form Factors: 2280, 22110

System Cooling

- Fans**
 - 4 Heavy duty fans
 - 2 Rear exhaust fans
 - 2 Optional Rear fans (required for Passive GPUs)

- Heatsink**
 - 2 Active heatsink with optimal fan speed control

Power Supply


2200W Redundant Power Supplies with PMBus

- Total Output Power and Input**
 - 1200W with Input 100-127Vac
 - 1800W with Input 200-220Vac
 - 1980W with Input 220-230Vac
 - 2090W with Input 230-240Vac
 - 2200W with Input 220-240Vac (for UL/cUL use only)
 - 2090W with Input 230-240Vdc (for CCC only)

- AC Input Frequency**
 - 50-60Hz

- Dimension (W x H x L)**
 - 76 x 40 x 336 mm

Audio	<ul style="list-style-type: none"> 7.1 HD Jacks
Serial Port/Header	<ul style="list-style-type: none"> 2 COM ports (1 rear, 1 Header)
System BIOS	
BIOS Type	<ul style="list-style-type: none"> AMI 32Mb SPI Flash ROM
Management	
Software	<ul style="list-style-type: none"> Intel® Node Manager IPMI 2.0 SSM, SPM, SUM SuperDoctor® 5
PC Health Monitoring	
CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors

+12V	<ul style="list-style-type: none"> Max: 100A / Min: 0A (100-127Vac) Max: 150A / Min: 0A (200-220Vac) Max: 165A / Min: 0A (220-230Vac) Max: 174.17A / Min: 0A (230-240Vac) Max: 183.3A / Min: 0A (220-240Vac)
5VSB	<ul style="list-style-type: none"> Max: 1A / Min: 0A
Output Type	<ul style="list-style-type: none"> Backplanes (gold finger)
Certification	 Titanium Level [Test Report]

Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
Environmental Spec.	<ul style="list-style-type: none"> 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-X11DPG-QT	1	Super X11DPG-QT Motherboard
	CSE-747BTS-R2K20BP	1	4U Chassis
Backplane	BPN-SAS3-747TQ-N4	1	8-port 4U/Tower SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3 HDD/SSD and 4x NVMe/SAS3/SATA3 storage devices
Cable 1	CBL-0188L-02	2	MINI SAS-4 SATA,INT,64/54/44/34CM,64CM SB,30AWG
Parts	MCP-260-00042-2N	1	STD I/O shield for X9/X10/X11 server MB with EMI Gasket & Mylar
Manual	MNL-2045-QRG	1	7049GP-TRT Quick Reference Guide
Heatsink / Retention	SNK-P0070APS4	2	4U Active CPU Heat Sink Supporting Narrow Bolster Plate Mounting Mechanism for X11 Purley Platform
* Power Supply	PWS-2K20A-1R	2	1U 2200W Redundant, Titanium, 76(W) X 40(H) X 336(L) mm
* Power Distributor	PDB-PT747-6824	1	Power Distributor Board is for 4U GPU solution using regular
* Cable 2	CBL-0071L	1	CBL,FRONT CNTL,16 TO 16 PIN,RA,RND TUBE,75CM,28AWG
* Cable 3	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
* Cable 4	CBL-0216L	4	4 PIN TO 4 PIN MIDDLE FAN POWER EXTENSION, 20cm. 24AWG(PWM)
* Cable 5	CBL-0286L	2	4 to 4 pin rear fan pwr ext w/ square header, 30cm (PWM). 24AWG
* Cable 6	CBL-PWEX-1040	4	PWYCB,GPU,2x4M/CPU to two (2x3F+2x1F)/PCIe,P4.2, 5CM,16/20AW
* FAN 1	FAN-0082L4	2	80x80x38 mm 4-pin PWM Fan Assembly for SC743, SC745
* FAN 2	Fan-0114L4	2	92x38mm 4-PIN PWM FAN W/ HUS for SC747
* FAN 3	FAN-0138L4	2	92x92x38 mm, 7.5K RPM, SC747 Middle Fan for Passive Cooling GPU
* Front Bezel	MCP-210-74701-0B	1	SC747 plastic front bezel
* Drive Tray(s)	MCP-220-00073-0B	3	Black 5.25 drive tray w/o rail (SC747)
* Drive Tray(s)	MCP-220-00094-0B	8	Black gen 6.5 hot-swap 3.5 inch HDD Tray
* Front Panel	MCP-280-74702-0N	1	SC747BTQ-R2K04B Front Control Panel PCB (2x USB3.0, Audio)
* Parts	MCP-290-74701-0B	1	Black plastic top cover for SC747
* Parts	MCP-290-74702-0N	1	GPU Card Holder (11 slots) for SC747TQ, SC842
* Parts	MCP-290-74703-0B	1	fixed 3.5" dummy cover for SC747
* Parts	MCP-290-74709-0B	1	Plastic feet (2 pcs/set) for 4U tower chassis, black color

Notes:

1. Parts with * are inside the chassis
2. 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
Passive GPU Kit	MCP-320-74702-0N-KIT	1	X11 GPU Kit for passive GPU/Coprocessor support
GPU Dummy Assembly	MCP-240-00096-0N	-	SC747B GPU / Add-on Card Dummy Assembly (2 Slots)-Single Pack
HDD Converter	MCP-220-93801-0B	-	Black Hotswap Gen 6 3.5 to 2.5 HDD Tray (SC747, 936, 938 and Blade)
Storage Control Card and Cable(s)	AOC-S3008L-L8i & 2x CBL-SAST-0699	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD SATA/SAS drives
	AOC-S3108L-H8iR & 2x CBL-SAST-0699	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60;
	AOC-S3108L-H8iR-16DD	-	MINI SAS HD,12G,INT,30AWG
	& 2x CBL-SAST-0699	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 5, 6, 10, 50, 60

			5, 6, 10, 50, 60; MINI SAS HD, 12G, INT, 30AWG
Super Cap for LSI 3108	1x BTR-TFM8G-LSICVM02 & 1x BKT-BBU-BRACKET-05	-	LSI Supercap w 8GB CV 24 cable (whole kit) & Supercap mounting bracket for PCI-E location
NVMe Kit	AOC-SLG3-4E4T-O	1	4 Port NVMe PCIe X16 Retimer, HF
	CBL-SAST-0847	4	OCuLink v.1.0 ,INT, PCIe NVMe SSD, 76CM, 11D38F27D, 34AWG, RoHS
	MCP-220-00150-0B	4	NVMe version of 3.5" HDD Tray (Convert 3.5" to 2.5" for 747/936/938)
Intel VROC RAID Key	<u>AOC-VROCINTMOD</u>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
	<u>AOC-VROCSTNMOD</u>	1	Intel VROC Standard, RAID 0, 1, 10
	<u>AOC-VROCPREMOD</u>	1	Intel VROC Premium, RAID 0, 1, 5, 10

Network Card(s)	AOC-S100G-m2C	-	Standard low-profile 2-port QSFP28 100GbE PCI-E 3.0 x16, based on Mellanox ConnectX-4 EN chipset	
	AOC-S40G-i2Q	-	Standard Low-Profile Dual-port 40GbE controller with 2x QSFP ports	
	AOC-S25G-b2S	-	Standard Low-Profile Dual-port 25GbE controller with 2 SFP28 ports,	
	AOC-S25G-m2S	-	based on Broadcom BCM57414	
	AOC-STG-b4S	-	Standard low-profile 2-port 25GbE with SFP+, based on Mellanox ConnectX-4 LX EN chipset	
	AOC-STG-i4S	-	Standard Low-profile Quad-port 10GbE controller with 4x SFP+ ports	
	AOC-STGN-i2S	-	Standard Low-Profile Quad-port 10GbE controller with 4x SFP+ ports	
	AOC-STGN-i1S	-	Standard Low-Profile Quad-port 10GbE controller with 4x SFP+ ports	
	AOC-STG-i2T	-	Standard Low-Profile Dual-port 10GbE controller with 2x SFP+ ports	
	AOC-SGP-i4	-	Standard Low-Profile Single-port 10GbE controller with 1x SFP+ port	
	AOC-SGP-i2	-	Standard Low-Profile Dual-port 10GbE controller with 2x RJ45 (10GBase-T) ports	
				Standard Low-Profile Quad-port GbE controller with 4x RJ45 ports
				Standard Low-Profile Dual-port GbE controller with 2x RJ45 ports
Mounting Rails	MCP-290-00059-0B	1	Rail set+handles, quick/quick, optional for 4U 17.2"W tower	
Front Bezel	MCP-210-74703-0B	1	Front bezel cover (for 5.25" bay) for rackmount	
DVD Kit	DVM-LITE-DVDRW24-HBT1	1	BLACK LITE-ON 5.25" HH 24X DVD-RW SATA DRIVE PBF	
	CBL-0082L	1	Y split , big 4 pin to two RA SATA power extension 15cm, 18AWG	
	CBL-0044L	1	SATA CABLE 57.5CM FLAT S-S PBF.26AWG flat	
TPM Security Module	AOM-TPM-9670V	1	SPI capable vertical TPM 2.0 provisioned for client, RoHS	
Global Services & Support	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service	
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service	
Software	<u>SFT-OOB-LIC</u> • eStore	1	OOB Management Package (per node license)	
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)	

Note: For Coprocessors, GPUs, VCA, FPGA cards not listed in table above please contact sales to discuss compatibility.

