



Integrated Board



Super X11DPG-QT

**Views: | [Angled View](#) | [Top View](#) |
| [Front View](#) | [Rear View](#) |**

[▶ Drivers & Utilities](#) | [▶ BIOS](#) | [▶ IPMI](#) | [▶ Tested Memory](#) | [▶ Tested M.2 List](#) | [▶ NVMe Options](#) | [▶ Manuals](#) | [▶ OS Certification Matrix](#) | [▶ Compatible GPU List](#) | [▶ Quick-References Guide](#) | [▶ Drive Options](#)

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)
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Motherboard

Super X11DPG-QT

Processor/Cache

CPU	- Dual Socket P (LGA 3647) 2nd Gen. Intel® Xeon® Scalable Processors (Cascade Lake/Skylake)[‡], 3 UPI up to 10.4GT/s - Support CPU TDP 70-205W
Cores	Up to 28 Cores
Note	[‡] BIOS version 3.0a or above is required to support 2nd Gen. Intel® Xeon® Scalable processors
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 tw o 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 w ith 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
Audio	7.1 HD Jacks
Serial Port/Header	2 COM ports (1 rear, 1 Header)

System BIOS

BIOS Type	AMI 32Mb SPI Flash ROM
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Chassis

Form Factor	4U Rackmountable / Tow er - 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	- Pow er On/Off button - System Reset button
LEDs	- Pow er status LED - Hard drive activity LED - Netw ork activity LEDs - System Overheat & Pow er Fail LED
Ports	2 Front USB 3.0 Ports

Expansion Slots

PCI-Express	4 PCI-E 3.0 x16 (double-w idth) slots 2 PCI-E 3.0 x16 (single-w idth) slots 1 PCI-E 3.0 x4 (in x8 slot)
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Drive Bays / Storage

Hot-swap	8 Hot-sw ap 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 w ith optimal fan speed control

Power Supply

2200W Redundant Pow er Supplies w ith PMBus	
Total Output Power and Input	1200W w ith Input 100-127Vac 1800W w ith Input 200-220Vac 1980W w ith Input 220-230Vac 2090W w ith Input 230-240Vac 2200W w ith Input 220-240Vac (for UL/cUL use only) 2090W w ith Input 230-240Vdc (for CCC only)
AC Input Frequency	50-60Hz
Dimension (W x H x L)	76 x 40 x 336 mm
+12V	- 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	Max: 1A / Min: 0A

Software	■ Intel® Node Manager ■ IPMI 2.0 ■ SSM, SPM, SUM ■ SuperDoctor® 5
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PC Health Monitoring

CPU	■ Monitors for CPU Cores, Chipset Voltages, Memory. ■ 4+1 Phase-switching voltage regulator
FAN	■ Fans with tachometer monitoring ■ Status monitor for speed control ■ Pulse Width Modulated (PWM) fan connectors
Temperature	■ Monitoring for CPU and chassis environment ■ Thermal Control for fan connectors

Output Type	■ Backplanes (gold finger)
Certification	 Titanium Level [Test Report]

Operating Environment

RoHS	■ RoHS Compliant
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-X11DPG-QT	1	Super X11DPG-QT Motherboard
	CSE-747BTS-R2K20BP	1	4U Chassis
Backplane	BPN-SAS3-747TQ-N4	1	8-port 4U/Tow er 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	Pow er 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 pow er cord 16AWG 6ft, PBF (default for high w att)
* 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 pw r ext w / square header, 30cm (PWM). 24AWG
* 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-sw ap 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 tow er 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 Hotsw ap 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 & 2x CBL-SAST-0699	-	MINI SAS HD,12G,INT,30AWG
			Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 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 (w hole kit) & Supercap mounting bracket for PCIe 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-VROCPREM0D</u>	1	Intel VROC Premium, RAID 0, 1, 5, 10
Network Card(s)	AOC-S100G-m2C	-	Standard low -profile 2-port QSFP28 100GbE PCIe 3.0 x16,

	AOC-S40G-i2Q	-	based on Mellanox ConnectX-4 EN chipset Standard Low -Profile Dual-port 40GbE controller w ith 2x QSFP ports
	AOC-S25G-b2S	-	Standard Low -Profile Dual-port 25GbE controller w ith 2 SFP28 ports, based on Broadcom BCM57414
	AOC-S25G-m2S	-	Standard low -profile 2-port 25GbE w ith SFP+, based on Mellanox ConnectX-4 LX EN chipset
	AOC-STG-b4S	-	Standard Low -profile Quad-port 10GbE controller w ith 4x SFP+ ports
	AOC-STG-i4S	-	Standard Low -Profile Quad-port 10GbE controller w ith 4x SFP+ ports
	AOC-STGN-i2S	-	Standard Low -Profile Dual-port 10GbE controller w ith 2x SFP+ ports
	AOC-STGN-i1S	-	Standard Low -Profile Single-port 10GbE controller w ith 1x SFP+ port
	AOC-STG-i2T	-	Standard Low -Profile Dual-port 10GbE controller w ith 2x RJ45 (10GBase-T) ports
	AOC-SGP-i4	-	Standard Low -Profile Quad-port GbE controller w ith 4x RJ45 ports
	AOC-SGP-i2	-	Standard Low -Profile Dual-port GbE controller w ith 2x RJ45 ports
Mounting Rails	MCP-290-00059-0B	1	Rail set+handles, quick/quick, optional for 4U 17.2"W tow er
Front Bezel	MCP-210-74703-0B	1	Front bezel cover (for 5.25" bay) for rackmount
DVD Kit	DVM-LITE-DVDRW24-HBT	1	BLACK LITE-ON 5.25" HH 24X DVD-RW SATA DRIVE PBF
	CBL-0082L	1	Y split , big 4 pin to tw o RA SATA pow er 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> • <i>eStore</i>	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.

