

SuperWorkstation 5049A-T



Integrated Board



Super X11SPA-TF

Key Features

1. Single Socket P (LGA 3647) support
2nd Gen Intel® Xeon® Scalable
processors (Cascade Lake/Skylake)‡
2. 12 DIMMs; up to 3TB 3DS ECC
DDR4-2933MHz† RDIMM/LRDIMM
3. 4 PCI-E 3.0 x16, 3 PCI-E 3.0 x8
(in x16) slots,
M.2 Interface: 4 PCI-E 3.0 x4
M.2 Form Factor: 2242/2260/2280/22110
M.2 Key: M-Key
* M.2 support RAID 0,1 (up to RAID 5, 10), VROC key
is required for RAID 1
4. 1x 10GBase-T and 1x 1GbE LAN ports
5. 7.1 HD Audio
6. 8 Hot-swap 3.5" SAS3/SATA3 drive bays
with SGPIO
7. 1000/1200W Multi-output Power Supply
Platinum Level Certified

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

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

Specifications

Product SKUs

SuperWorkstation ■ **SYS-5049A-T (Black)**

Motherboard

Super X11SPA-TF

Processor/Cache

CPU ■ Single Socket P (LGA 3647)
■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡]
■ Support CPU TDP up to 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)

System Memory

Memory Capacity ■ 12 DIMM slots
■ Up to 3TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM

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

On-Board Devices

Chipset ■ Intel® C621 chipset

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

Network Controllers ■ Single LAN with Intel® Ethernet Controller I210-AT
■ Single LAN with Aquantia® AQC107 10G Ethernet Controller
■ Single LAN with Realtek RTL8211E PHY (dedicated IPMI)

IPMI ■ ASPEED AST2500

Audio ■ 7.1 channel HD Audio by Realtek ALC888S

Input / Output

SATA ■ 8 SATA3 (6Gbps) ports

LAN ■ 1 RJ45 Gigabit Ethernet LAN port
■ 1 RJ45 10GBase-T Ethernet LAN port
■ 1 RJ45 Dedicated IPMI LAN port

USB ■ 6 USB 3.1 Gen1 ports (4 rear, 2 headers)
■ 4 USB 3.1 Gen2 ports (1 rear Type A, 1 rear Type C, 1 Type A header, 1 Type C header)
■ 2 USB 2.0 ports (2 headers, Type A)

Audio ■ 7.1 HD Audio with optical S/PDIF

Video ■ 1 VGA port via AST2500 BMC

Serial Port / Header ■ 2 COM ports (1 rear, 1 header)

Chassis

Form Factor ■ 4U Rackmountable / Tower
■ Optional Rackmount Kit

Model ■ **CSE-743TS-1200BP-SQ**

Dimensions and Weight

Height ■ 17.8" (452mm)

Width ■ 7.0" (178mm)

Depth ■ 25.5" (648mm)

Gross Weight ■ 71 lbs (32.2 kg)

Available Colors ■ Black

Front Panel

Buttons ■ Power On/Off button
■ System Reset button

LEDs ■ Power LED
■ Hard drive activity LED
■ Network activity LEDs
■ System Overheat / Fan Fail LED

Ports ■ 2 front USB 3.0 Ports

Expansion Slots

PCI-Express ■ 4 PCI-E 3.0 x16 slots
■ 3 PCI-E 3.0 x8 (in x16 slot)

M.2 ■ M.2 Interface: 4 PCI-E 3.0 x4, RAID 0 & 1
■ Form Factor: 2242/2260/2280/22110
■ Key: M-Key
■ M.2 support RAID 0, 1 (up to RAID 5, 10), VROC key is required for RAID1
*NOTE: When M.2 slots C01 or C02 is installed, PCIe slot 1 is disabled. When M.2 C03 or M.2 C04 is installed, PCIe slot 4 works x8.

Drive Bays

Hot-swap ■ 8 Hot-swap 3.5" SAS3/SATA3 drive bays (SATA3 default)

Peripheral Bay(s) [90° Rotatable] ■ 3x 5.25" drive bays

Backplane

Supports 8 SATA3 or 8 SAS3 HDD

System Cooling

Fans ■ 2 Super quiet PWM chassis fans (support up to 4 fans)
■ 1 Super quiet rear fan with optimal fan speed control

TPM	<ul style="list-style-type: none"> 1 TPM 2.0 Header
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System BIOS

BIOS Type	<ul style="list-style-type: none"> 256Mb SPI Flash with AMI BIOS
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Management

Software	<ul style="list-style-type: none"> Intel® Node Manager <u>IPMI 2.0</u> <u>SSM, SPM, SUM</u> <u>SuperDoctor® 5</u> Watchdog
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PC Health Monitoring

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
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FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
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Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors
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Power Supply

1200W high-efficiency power supply w/ PMBus

AC Input	<ul style="list-style-type: none"> 1000W: 100-114.9 V, 50-60 Hz, 12 Amp 1200W: 114.9-240 V, 50-60 Hz, 12-8 Amp
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DC Output	<ul style="list-style-type: none"> +3.3V / +5V / +12V / -12V / +5VSB
1000W max	<ul style="list-style-type: none"> 20A / 20A / 83A / 0.3A / 3A
1200W max	<ul style="list-style-type: none"> 20A / 20A / 99A / 0.3A / 3A

Note:	<ul style="list-style-type: none"> Max. continuous combined load on +3.3V and +5V output shall not exceed 120W.
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Certification	 Platinum Certified
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Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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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)
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Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X11SPA-TF	1	Super X11SPA-TF Motherboard
	CSE-743TS-1200BP-SQ	1	4U Chassis
Backplane	BPN-SAS3-743A	1	8-port 4U/Tower 3.5-inch SAS3/SAS2/SATA3 12Gbps backplane for SC743/SC745 chassis
Cable 1	CBL-SAST-0631	2	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,55CM,55CM SB,30AWG
Parts	MCP-260-00142-0N	1	STD I/O Shield for X11SPA-TF with EMI Gasket
Manual	MNL-2196-QRG	1	SYS-5049A-T Quick Reference Guide
* Power Supply	PWS-1K25P-PQ	1	PS2 1200W Multi Output High Efficiency P
* Cable 2	CBL-0084	1	Front control cable 16 pin split, 6
* Cable 3	CBL-0087	1	CBL,FRONT CNTL,16 TO 16 PIN,Ribbon,50CM
* Cable 4	CBL-0160L	1	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
* Cable 5	CBL-0216L	4	4 PIN TO 4 PIN MIDDLE FAN POWER EXTENSION, 20cm. 24AWG(PWM)
* FAN 1	FAN-0103L4	1	92x25 4Pin PWM Fan assembly for SC743 Super Quiet rear fan
* FAN 2	FAN-0104L4	2	80x25,4 Pin PWM fan assem. for SC743 Super Quiet chassis fan
* Drive Tray(s)	MCP-220-00092-0B	8	Black Hot-swap 3.5inch HDD Tray (w/o logo)
* Parts	MCP-110-00020-0N	2	#632*5L flat head screw (for hot-swap 3.5" HDD tray)
* Drive Tray(s)	MCP-220-00081-0N	1	3.5" dummy HDD (hollow-panned) for MCP-220-00075-0B,RoHS/REACH,PBF

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
Heat Sink	SNK-P0071APS4	-	4U Active CPU Heat Sink Supporting SYS-5049A-T Extreme X11 UP Workstation
Mounting Rails	CSE-PT26L-B	-	Chassis Mounting Rails (Black)
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00080-0B	-	Black hot-swap 3.5" to 2.5" HDD tray - Add QTY 1 per drive
Storage Control Card and Cable(s)	AOC-S3008L-L8e 2x CBL-SAST-0593	-	Std LP, 8 WIO L ports, 12Gb/s per port-gen3, 122HDD, HBA Internal Mini-SAS HD to Mini-SAS HD 60cm, 30AWG, 12Gb/s
	AOC-S3008L-L8i 2x CBL-SAST-0593		Std LP, 8 WIO L ports, 12Gb/s per port-gen3, 63HDD, RAID 0,1,1E Internal Mini-SAS HD to Mini-SAS HD 60cm, 30AWG, 12Gb/s
	AOC-S3108L-H8iR 2x CBL-SAST-0593		Std LP, 8 WIO L ports, 12Gb/s per port-gen3, 240HDD, RAID 0,1,5,6,10,50,60 Internal Mini-SAS HD to Mini-SAS HD 60cm, 30AWG, 12Gb/s
DVD-ROM	DVM-LITE-DVDRW24-HBT	-	BLACK LITE-ON 5.25" HH 24X DVD-RW SATA DRIVE PBF
	1x CBL-SAST-0624		SATA,INT,ROUND,ST-ST,70CM,30AWG
	1x CBL-0082L		Y split, big 4 pin to two RA SATA power extension 15cm, 18AWG

