

# SuperWorkstation 5049A-T



**Integrated Board**



**Super X11SPA-TF**

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

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

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

## Key Features

1. Single Socket P (LGA 3647) support  
2nd Gen Intel® Xeon® Scalable  
processors (Cascade Lake/Skylake)<sup>‡</sup>
2. 12 DIMMs; up to 3TB 3DS ECC  
DDR4-2933MHz<sup>†</sup> 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**

# 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<sup>‡</sup>  
■ Support CPU TDP up to 205W

**Cores** ■ Up to 28 Cores

**Note** <sup>‡</sup> 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<sup>†</sup> RDIMM/LRDIMM

**Memory Type** ■ 2933<sup>†</sup>/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM

**Note** <sup>†</sup> 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-743AC-1K26B-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

## Power Supply

1200W PS2 Multi-output Power Supply

**Power Efficiency** ■ 94%

<b>TPM</b>	<ul style="list-style-type: none"> <li>1 TPM 2.0 Header</li> </ul>
<b>System BIOS</b>	
<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>256Mb SPI Flash with AMI BIOS</li> </ul>
<b>Management</b>	
<b>Software</b>	<ul style="list-style-type: none"> <li>Intel® Node Manager</li> <li><u>IPMI 2.0</u></li> <li><u>SSM, SPM, SUM</u></li> <li><u>SuperDoctor® 5</u></li> <li>Watchdog</li> </ul>
<b>PC Health Monitoring</b>	
<b>CPU</b>	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, Chipset Voltages, Memory.</li> <li>4+1 Phase-switching voltage regulator</li> </ul>
<b>FAN</b>	<ul style="list-style-type: none"> <li>Fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>Thermal Control for fan connectors</li> </ul>

<b>Total Output Power and Input</b>	<ul style="list-style-type: none"> <li>1000W with Input 100 - 120Vac</li> <li>1200W with Input 120 - 240Vac</li> </ul>
<b>AC Input Frequency</b>	<ul style="list-style-type: none"> <li>50-60 Hz</li> </ul>
<b>Dimensions (L x W x H)</b>	<ul style="list-style-type: none"> <li>185 x 150 x 86 mm</li> </ul>
<b>Output Type</b>	<ul style="list-style-type: none"> <li>24pin ATX</li> </ul>
<b>-12V</b>	<ul style="list-style-type: none"> <li>Max: 0.3A / Min: 0A</li> </ul>
<b>+12V</b>	<ul style="list-style-type: none"> <li>Max: 83A (100Vac - 120Vac)</li> <li>Max: 99A (120Vac - 240Vac)</li> </ul>
<b>+5V</b>	<ul style="list-style-type: none"> <li>Max: 20A / Min: 0A</li> </ul>
<b>+3.3V</b>	<ul style="list-style-type: none"> <li>Max: 20A / Min: 0A</li> </ul>
<b>+5Vsb</b>	<ul style="list-style-type: none"> <li>Max: 3A / Min: 0A</li> </ul>
<b>Certification</b>	 <b>Platinum Certified</b>

#### Operating Environment

<b>RoHS</b>	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
<b>Environmental Spec.</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)</li> <li>Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X11SPA-TF	1	Super X11SPA-TF Motherboard
	CSE-743AC-1K26B-SQ	1	4U Chassis
<b>Backplane</b>	BPN-SAS3-743A	1	8-port 4U/Tower 3.5-inch SAS3/SAS2/SATA3 12Gbps backplane for SC743/SC745 chassis
<b>Cable 1</b>	CBL-SAST-0631	2	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,55CM,55CM SB,30AWG
<b>Parts</b>	MCP-260-00142-0N	1	STD I/O Shield for X11SPA-TF with EMI Gasket
<b>Manual</b>	MNL-2196-QRG	1	SYS-5049A-T Quick Reference Guide
<b>* Power Supply</b>	PWS-1K26P-PQ	1	1000W/1200W PS2 Multi output power supply with modular cable
<b>* Cable 2</b>	CBL-0084	1	Front control cable 16 pin split, 6
<b>* Cable 3</b>	CBL-0087	1	CBL,FRONT CNTL,16 TO 16 PIN,Ribbon,50CM
<b>* Cable 4</b>	CBL-0160L	1	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
<b>* Cable 5</b>	CBL-0216L	4	4 PIN TO 4 PIN MIDDLE FAN POWER EXTENSION, 20cm. 24AWG(PWM)
<b>* FAN 1</b>	FAN-0103L4	1	92x25 4Pin PWM Fan assembly for SC743 Super Quiet rear fan
<b>* FAN 2</b>	FAN-0104L4	2	80x25,4 Pin PWM fan assem. for SC743 Super Quiet chassis fan
<b>* Drive Tray(s)</b>	MCP-220-00193-0N	8	2.5"/3.5" 2-in-1 HDD tray

#### 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
<b>Heat Sink</b>	SNK-P0071APS4	-	4U Active CPU Heat Sink Supporting SYS-5049A-T Extreme X11 UP Workstation
<b>Fan</b>	FAN-0074L4	1	80x80x38,5000 RPM High-Performance PWM middle fan
<b>Mounting Rails</b>	CSE-PT26L-B	-	Chassis Mounting Rails (Black)
<b>Storage Control Card and Cable(s)</b>	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
<b>DVD-ROM</b>	DVM-LITE-DVDRW24-HBT1	-	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

