

SuperWorkstation 5049A-TR



Integrated Board



Super X11SPA-T

**Views: | [Angled View](#) | [Side View](#) |
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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)[‡] Intel® Xeon® W-32xx processor

2. Intel® Xeon® Scalable Processors:
Up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz; or 3TB DCPMM, DDR4-2666MHz, in 12 DIMM slots.

Intel® Xeon® W-3200 Processors:
Up to 2TB 3DS ECC L/RDIMM; up to 1TB 3DS L/RDIMM.

3. 4 PCI-E 3.0 x16,
3 PCI-E 3.0 x8 (in x16 slot)
M.2 Interface: 4 PCI-E 3.0 x4, RAID 0, 1
M.2 Form Factor: 2242/2260/2280/22110
M.2 Key: M-Key

4. 1x 10GBase-T and 1x 1GbE LAN ports

5. 8 Hot-swap 3.5" SAS/SATA bay with SGPIO

6. 1 VGA port, VGA connector is dedicated for IPMI

7. 7.1 HD Audio

8. 2200W Redundant (1+1) Power Supplies **Titanium Level Certified**

Specifications

Product SKUs

SuperWorkstation ■ SYS-5049A-TR (Black)

Motherboard

Super X11SPA-T

Processor/Cache

CPU

- Single Socket P (LGA 3647)
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡]
- Intel® Xeon® W-32xx 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
- Intel® Xeon® Scalable Processors: Support up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz; or 3TB DCPMM, DDR4-2666MHz, in 12 DIMM slots.
- Intel® Xeon® W-3200 Processors: Support up to 2TB 3DS ECC RDIMM/LRDIMM; up to 1TB 3DS RDIMM/LRDIMM.

Note This system doesn't support DCPMM

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)

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)
- 2 USB 2.0 ports (2 headers, Type A)

Video ■ 1 VGA port

Audio ■ 7.1 HD Audio with optical S/PDIF

Chassis

Form Factor

- 4U Rackmountable / Tower
- Optional Rackmount Kit

Model ■ CSE-747BTS-R2K20BP

Dimensions and Weight

Height ■ 18.1" (460mm)

Width ■ 7.0" (178mm)

Depth ■ 26.5" (673mm)

Weight

- Gross Weight: 72 lbs (32.66 kg)
- Net Weight: 57 lbs (25.85 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)
- PCI-E x16 Slot#1 shares with M.2, Slot#2 shares with Slot#3 (NA/16,8/8), Slot#4 shares with Slot#5 (NA/16,8/8), Slot#6 shares with Slot#7 (NA/16,8/8) (16/NA/16/NA/16/NA/16 or 16/8/8/8/8/8/8)

M.2

- M.2 Interface: PCI-E 3.0 x4
- Form Factor: 2260, 2280, 22110
- Key: M-Key
- M.2 shares PCI-E lanes with PCI-Ex16 slot#1, VROC key is required for RAID

Drive Bays

Hot-swap ■ 8 Hot-swap 3.5" SAS2/SATA3 drive bays (SATA3 default)

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

Backplane

Supports 8 SATA3 or 8 SAS2 HDD

System Cooling

Fans

- 4x 92mm hot-swap fan(s)
- 2x 80mm rear hot-swap exhaust PWM fan(s)

Power Supply

2200W Redundant Power Supplies with PMBus

| | |
|-----------------------------|-------------------------------------------------------------------------------------|
| Serial Port / Header | <ul style="list-style-type: none"> 1 COM port (header) |
| DOM | <ul style="list-style-type: none"> 2 SuperDOM (Disk on Module) ports |
| TPM | <ul style="list-style-type: none"> 1 TPM 2.0 Header |

System BIOS

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

Management

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

PC Health Monitoring

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|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |

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|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Output Power and Input | <ul style="list-style-type: none"> 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) |
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|---------------------------|-----------------------------------------------------------|
| AC Input Frequency | <ul style="list-style-type: none"> 50-60Hz |
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|------------------------------|--------------------------------------------------------------------|
| Dimension (W x H x L) | <ul style="list-style-type: none"> 76 x 40 x 336 mm |
|------------------------------|--------------------------------------------------------------------|

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|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| +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) |
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|-------------|---------------------------------------------------------------------|
| 5VSB | <ul style="list-style-type: none"> Max: 1A / Min: 0A |
|-------------|---------------------------------------------------------------------|

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|--------------------|----------------------------------------------------------------------------|
| Output Type | <ul style="list-style-type: none"> Backplanes (gold finger) |
|--------------------|----------------------------------------------------------------------------|

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| Certification |   Titanium Level [Test Report] |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Operating Environment

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|-------------|------------------------------------------------------------------|
| 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) |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Parts List

Parts List - (Items Included)

| | Part Number | Qty | Description |
|------------------------------|--------------------|-----|-----------------------------------------------------------------------|
| Motherboard / Chassis | MBD-X11SPA-T | 1 | Super X11SPA-T Motherboard |
| | CSE-747BTS-R2K20BP | 1 | 4U Chassis |
| Backplane | BPN-SAS-747TQ | 1 | 4u, SAS Backplane,x8 3.5" HDD; SC747's; AMI 9072 support I2C & GPIO. |
| Cable 1 | CBL-0484L | 8 | SATA,INT,ROUND,ST-ST,55CM,30AWG |
| Cable 2 | CBL-CDAT-0661 | 2 | CBL,SGPIO,2X4F TO 2X4F,P2.54,ROUND CABLE,40CM,28AWG |
| Parts | MCP-260-00142-0N | 1 | STD I/O Shield for X11SPA-T with EMI Gasket |
| Manual | MNL-2219-QRG | 1 | SYS-5049A-TR Quick Reference Guide |
| * Power Supply | PWS-2K20A-1R | 2 | 1U 2200W Redundant, Titanium, 76(W) X 40(H) X 336(L) mm |
| * Cable 3 | CBL-0071L | 1 | CBL,FRONT CNTL,16 TO 16 PIN,RA,RND TUBE,75CM,28AW |
| * Cable 4 | CBL-0286L | 2 | 4 to 4 pin rear fan pwr ext w/ square header, 30cm (PWM). 24AWG |
| * Cable 5 | CBL-0160L | 2 | NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt) |
| * Cable 6 | CBL-0216L | 4 | 4 PIN TO 4 PIN MIDDLE FAN POWER EXTENSION, 20cm. 24AWG(PWM) |
| * FAN 1 | FAN-0138L4 | 2 | 92x92x38 mm, 7.5K RPM, SC747 Middle Fan for Passive Cooling GPU |
| * FAN 2 | FAN-0082L4 | 2 | 80x80x38 mm 4-pin PWM Fan Assembly for SC743, SC745 |
| * FAN 3 | Fan-0114L4 | 2 | 92x38mm 4-PIN PWM FAN W/ HUS for SC747 |
| * Drive Tray(s) | MCP-220-00094-0B | 8 | Black gen 6.5 hot-swap 3.5 inch HDD Tray |
| * Drive Tray(s) | MCP-220-00073-0B | 3 | Black 5.25 drive tray w/o rail (SC747) |

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 |
|--------------------------------------------|----------------------|-----|------------------------------------------------------------------------------------------------------------|
| CPU Heatsink | SNK-P0071APS4 | - | High Performance 4U Active CPU Heatsink |
| M.2 Heatsink | SNK-C0121L-1 | - | M.2 Heatsink |
| Cable (PCIe) | CBL-PWEX-1040 | - | Adapter cable converts 8M/CPU to two (2x3F+2x1F)/PCIe. This is required for GeForce and Quadro video cards |
| Fan Kits for Various GPU Population | MCP-320-74703-0N-KIT | 1 | Fully-populated with Full-height Double-width Passive GPU cards |
| | MCP-320-74703-0N-KIT | 1 | Partially-populated with Full-height Double-width Passive GPU cards |
| | MCP-240-00096-0N | - | |
| | MCP-310-74706-0B | 1 | Fully-populated with Full-height Double-width Active GPU cards (30°C operating temp.) |
| | MCP-310-74706-0B | 1 | Partially-populated with Full-height Double-width Active GPU cards |
| | MCP-240-00096-0N | - | |
| | MCP-320-74704-0N-KIT | 1 | Fully-populated with Low-profile Single-width Passive GPU cards |
| HDD Converter | MCP-310-74705-0B | 1 | Partially-populated with Low-profile Single-width Passive GPU cards |
| | MCP-240-00169-0N | - | |
| | FAN-0148L4 | 2 | |
| | MCP-320-00040-0N | 2 | |
| 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 | - | Std LP, 8 WIO L ports, 12Gb/s per port-gen3, 63HDD, RAID 0,1,1E; |
| | 2x CBL-SAST-0699 | | Mini SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB,28/30AWG |
| | AOC-S3108L-H8iR | | Std LP, 8 WIO L ports, 12Gb/s per port-gen3, 240HDD, RAID 0,1,5,6,10,50,60; Mini SAS HD-4 |
| | 2x CBL-SAST-0699 | | SATA,12G,INT,75/75/90/90CM,75CM SB,28/30AWG |
| | AOC-S3108L-H8iR- | | |

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| | 16DD 2x CBL-SAST-0699 | | Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 5, 6, 10, 50, 60; Mini SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB,28/30AWG |
| 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 |
| Intel VROC RAID Key | AOC-VROCINTMOD | 1 | Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only) |
| | AOC-VROCSTNMOD | 1 | Intel VROC Standard, RAID 0, 1, 10 |
| | AOC-VROCPREMOD | 1 | Intel VROC Premium, RAID 0, 1, 5, 10 |
| 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-SAST-0624 | 1 | SATA,INT,ROUND,ST-ST,70CM,30AWG |
| | | | |
| TPM Security Module | AOM-TPM-9670V | 1 | SPI capable vertical TPM 2.0 provisioned for client,RoHS |
| Global Services & Support | OSNBD3/2/1 | - | 3/2/1-year onsite NBD service |
| Software | SFT-OOB-LIC • eStore | 1 | OOB Management Package (per node license) |

