

SuperServer 8049U-E1CR4T(Complete System Only)



Integrated Board



Super X11QPH+

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

Complete System Only: To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 4 CPUs, 4 DIMMs and 1 HDD recommended). Please contact your Supermicro sales rep for special 2 CPUs with 2 DIMMs requirements with fees.

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [NVMe Options](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#) ▶ [Drive Options](#)

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

Key Features

4-Way MP

Up to 112 cores per system
In-Memory Database Application
ERP, CRM

Business Intelligence
Scientific Computing

Scale-up HPC

Cloud and Virtualization needs

1. Quad Socket P (LGA 3647) support
2nd Gen. Intel® Xeon® Scalable
processors (Cascade Lake/Skylake)‡

2. 48 DIMMs; up to 12TB 3DS ECC
DDR4-2933MHz† RDIMM/LRDIMM,
Supports Intel® Optane™ DCPMM††

3. 6 PCI-E 3.0 x16 slots,
10 PCI-E 3.0 x8 slots
Up to 6 double width passive GPUs

4. 4x 10GBase-T LAN ports via
AOC-4UR66-I4XTF-P

5. 24 Hot-swap 3.5" SAS3/SATA3 drive
bays supported via optional Add-on
RAID controller card; 8 Hybrid ports
with NVMe support via optional AOC

6. 8x 9cm heavy duty fans

7. 1600W (3+1) Redundant Power
Supplies, **Platinum Level (96%)**

Specifications

Product SKUs

SYS-8049U-E1CR4T	<ul style="list-style-type: none"> SuperServer 8049U-E1CR4T (Black)
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Motherboard

Super X11QPH+

Processor/Cache

CPU	<ul style="list-style-type: none"> Quad 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
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Cores	<ul style="list-style-type: none"> Up to 28 Cores
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Note	<ul style="list-style-type: none"> [‡] BIOS version 3.0a or above is required to support 2nd Gen Intel® Xeon® Scalable processors
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System Memory

Memory Capacity	<ul style="list-style-type: none"> 48 DIMM slots Up to 12TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM Supports Intel® Optane™ DCPMM^{††}
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Memory Type	<ul style="list-style-type: none"> 2933[†]/2666MHz ECC DDR4 RDIMM/LRDIMM
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Note	<ul style="list-style-type: none"> [†] 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.
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On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C621 chipset
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SATA	<ul style="list-style-type: none"> SATA3 (SSD only) via Intel C621; RAID 0, 1
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Network Connectivity	<ul style="list-style-type: none"> 4x 10GBase-T LAN ports via AOC-4UR66-I4XTF-P; Other options
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IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
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Graphics	<ul style="list-style-type: none"> ASPEED AST2500 BMC
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Input / Output

SATA	<ul style="list-style-type: none"> 2 SATA3 (SSD only) (6Gbps) ports at rear
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SAS	<ul style="list-style-type: none"> 24 SAS3 ports support via optional Add-on Cards
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NVMe	<ul style="list-style-type: none"> 8 Hybrid ports with NVMe support via AOC
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LAN	<ul style="list-style-type: none"> 4x 10GBase-T RJ45 LAN ports 1 RJ45 Dedicated IPMI LAN port
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USB	<ul style="list-style-type: none"> 2 USB 3.0 ports (rear)
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Video	<ul style="list-style-type: none"> 1 VGA Connector
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Serial Port / Header	<ul style="list-style-type: none"> 1 COM port (rear)
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DOM	<ul style="list-style-type: none"> 2 SuperDOM (Disk on Module) ports
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System BIOS

Chassis

Form Factor	<ul style="list-style-type: none"> 4U Rackmount
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Model	<ul style="list-style-type: none"> CSE-848UTS-R4800P
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Dimensions and Weight

Width	<ul style="list-style-type: none"> 17.2" (437mm)
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Height	<ul style="list-style-type: none"> 6.9" (177mm)
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Depth	<ul style="list-style-type: none"> 34.5" (876mm)
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Weight	<ul style="list-style-type: none"> Net Weight: 74.5 lbs (33.79 kg) Gross Weight: 115 lbs (52.16 kg)
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Available Colors	<ul style="list-style-type: none"> Black
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Front Panel

Buttons	<ul style="list-style-type: none"> Power On/Off button System Reset button
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LEDs	<ul style="list-style-type: none"> Power status LED HDD activity LED Network activity LEDs System information (overheat/UID) LED
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Expansion Slots

PCI-Express	<ul style="list-style-type: none"> 6 PCI-E 3.0 x16 slots 10 PCI-E 3.0 x8 slots
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(4 CPUs need to be installed for full access to PCI-E slots and onboard controllers. See [AOC Support](#) for details.)

Drive Bays

Hot-swap	<ul style="list-style-type: none"> 24 Hot-swap 3.5" SAS3/SATA3 drive bays Optional 24 SAS3 ports via AOC Optional 16 SAS3 ports via AOC + 8 NVMe ports via AOC
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System Cooling

Fans	<ul style="list-style-type: none"> 8x 9cm heavy duty fans with speed control
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AC/DC240V Input Redundant Power Supply

1000 / 1600W 1U Redundant Power Supply

Total Output Power	<ul style="list-style-type: none"> 1000W: 100 – 127Vac 1600W: 200 – 240Vac 1600W: 200 – 240Vdc (for CCC only)
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Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 185 mm
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Input	<ul style="list-style-type: none"> 100 – 127Vac / 13.8A / 47-63Hz 200 – 240Vac / 9.6A / 47-63Hz 200 – 240Vdc / 8.5A (CCC Only)
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+12V	<ul style="list-style-type: none"> Max: 83A / Min: 0A (1000W) Max: 132A / Min: 0A (1600W)
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12Vsb	<ul style="list-style-type: none"> Max: 2.1A / Min: 0A
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Output Type	<ul style="list-style-type: none"> Gold Finger
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Certification	<ul style="list-style-type: none">  Platinum Certified
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Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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BIOS Type	<ul style="list-style-type: none">■ 128Mb SPI Flash EEPROM with AMI BIOS
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Management

Software	<ul style="list-style-type: none">■ <u>SuperDoctor® 5</u>■ Watch Dog■ NMI■ <u>SUM</u>■ IPMI 2.0
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Power Configurations	<ul style="list-style-type: none">■ ACPI Power Management■ Power-on mode for AC power recovery
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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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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-X11QPH+	1	Super X11QPH+ Motherboard
	CSE-848UTS-R4800P	1	4U Chassis
Add-on Card / Module	AOC-4UR66-I4XTF-P	1	4U Ultra Riser 4-port 10GbE RJ45, based on Intel XL710-BM1 and Intel X557-AT4 (PHY), 2 PCI-E 3.0 x16 slot.,RoHS
Backplane	BPN-SAS3-826TQ-B2B	1	2-port 2U SAS3 12Gbps backplane, support up to 2x 2.5-inch SAS3/SATA3 HDD/SSD
Backplane	BPN-SAS3-846EL1-N8	1	24-Port 4U Expander Backplane Support up-to 16x 3.5" SAS3/SATA3 HDD/SSD and 8 x SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-0118L-03	1	MINI SAS-4 SATA,INT,23CM,25.5CM SB,30AWG
Cable 2	CBL-0449L	1	HDD power extension for X8OBN, special 8 pin to 4 HDD. 45cm. 18AWG
Cable 3	CBL-PWEX-0673	2	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 4	CBL-PWEX-0702	1	PWEX,2X4F/P4.2 TO 1X4F/P5.08/RA,32CM,18AWG,YEL,BLK*2,RED
Riser Card	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
Riser Card	RSC-R2UW-4E8	1	2U LHS WIO Riser card with four PCI-E x4 slots
Riser Card	RSC-S4-A6688	1	2U RHS Active Standard Riser Card with 2 PCI-E x8 Slots
Riser Card	RSC-S4R-A66888	1	2U RHS Active Standard Riser Card with Three PCI-E x8 Slot
Heatsink / Retention	SNK-P0068PS	4	2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Power Supply	PWS-1K69P-1R	4	AC-DC 1600W at high and 1000W at low line, Platinum Level

Optional Parts List

	Part Number	Qty	Description
2.5" Converter Trays	MCP-220-00166-0B	1~24	Gen-5.5 hot-swap tool-less 3.5-to-2.5 converter tray
Intel VROC HW Key	AOC-VROCPREMOD	1	Intel VROC HW Key (RSTe) - Premium, RAID 0, 1, 5, 10
	AOC-VROCSTNMOD	1	Intel VROC HW key (RSTe) - standard upgrade module
	AOC-VROCINTMOD	1	Intel VROC HW key (RSTe), Intel SSD only
Active Cooling GPU	GPU-NVQRTX8000	-	NVIDIA PNY Quadro RTX8000 48 GB GDDR6 PCIe 3.0
	GPU-NVQRTX6000	-	NVIDIA PNY Quadro RTX6000 24GB GDDR6 PCIe 3.0
	GPU-NVQRTX5000	-	NVIDIA PNY Quadro RTX5000 16GB GDDR6 PCIe 3.0
	GPU-NVQRTX4000	-	NVIDIA PNY Quadro RTX4000 8 GB GDDR6 PCIe 3.0
	GPU-NVQM6000	-	NVIDIA PNY Quadro M6000 12GB GDDR5 PCIe 3.0
	GPU-NVQM6000-24	-	NVIDIA PNY Quadro M6000 24GB GDDR5 PCIe3.0-ActiveCooling
	GPU-NVQGV100	-	NVIDIA PNY Quadro GV100 32GB HBM2 PCIe 3.0- Active Cooling
Passive Cooling GPU	GPU-NVTV100-16	-	NVIDIA Tesla V100 16GB HBM2 PCIe 3.0 -- Passive Cooling
	GPU-NVTV100-32	-	NVIDIA Tesla V100 32GB CoWoS HBM2 PCIe 3.0--Passive Cooling
	GPU-NVTT4	-	NVIDIA Tesla T4 16GB GDDR6 PCIe 3.0-- Passive Cooling 70
GPU Power Cable	CBL-PWEX-1042	1/GPU	GPU power cable - CPU 8 pin female to CPU 8 pin female, 50cm
	CBL-PWEX-1040	1/GPU	GPU power cable adapter - CPU 8 pin female to two PCIe 6+2 pin female, 5CM
	CBL-PWEX-0665	1/GPU	GPU power cable - PCIe 8 pin female (black) to CPU 8 pin female (white), 30cm
GPU Air Shroud	MCP-310-84808-0B	1/GPUx2	GPU Mylar air shroud in SC848U,HF,RoHS/REACH
GPU Rear Fan Kit	MCP-240-84807-0N	1/GPUx2	GPU Rear Fan Assembly Kit (for passive GPU only)
PCIe I/O bracket	MCP-120-00110-0N	1-2	PCIe I/O bracket w/o hole (solid)

CacheVault(s)	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	1	CacheVault for Broadcom 3108; Supercap mounting bracket for PCI-E location
Network Card(s)	AOC-MCX556A-ECAT	-	Mellanox ConnectX-5 VPI adapter card, EDR IB (100Gb/s) and 100GbE, dual-port QSFP28, PCIe3.0 x16, tall bracket, HF, RoHS
	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	AOC-S25G-m2S	-	Std LP 2-port 25G SFP28, Mellanox ConnectX-4 LX EN
	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel i350AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel 82599ES
	AOC-STGN-i1S	-	Standard LP, 1x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
Cable ARM Kits	MCP-290-00127-0N	1	39" rail set, quick/quick, 17.2"W, for Gen2 cable arm
	MCP-290-00128-0N	1	Gen2 cable arm for Ultra
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)

Storage Options List

Cases	AOC	Cable	Connection
For 24 SAS3 HDD	AOC-S3008L-L8i x1 or AOC-S3108L-H8iR x1	CBL-SAST-0593 x2	PCI-E slot 16
For 16 SAS3/SATA HDD + 8 U.2 NVMe SSD	AOC-S3008L-L8i x1 or AOC-S3108L-H8iR x1 or AOC-S3108L-H8iR-16DD x1	CBL-SAST-0593 x2	PCI-E slot 16
	AOC-SLG3-4E4T x2 or (*AOC-SLG3-8E2P x1	CBL-SAST-0848 x2 & CBL-SAST-0820 x6 & CBL-CDAT-0728 x1	PCI-E slot 12 & 14 PCI-E slot 14

(*) AOC-SLG3-8E2P x1 can replace AOC-SLG3-4E4T x2, but only half bandwidth support