

SuperServer 6019U-TN4RT (Complete System Only)



Integrated Board



X11DPU

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 2 CPUs and 4 DIMMs).

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

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

Key Features

Virtualization
Cloud Computing
High End Enterprise Server

1. Dual Socket P (LGA 3647) support 2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)[‡]
2. 24 DIMMs; up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM^{††}
3. 2 PCI-E 3.0 x16 slots (FH, 10.5" L), 2 PCI-E 3.0 x8 slots (1 LP, 1 internal LP)
4. 2x 10GBase-T Ethernet ports
5. 4 Hot-swap 3.5" drive bays: 4 NVMe/SATA3 hybrid ports; 2 internal M.2 (1 SATA3, 1 NVMe); 1 M.2 NVMe port, Optional extra M.2 NVMe and SATA3 ports
6. 8 Heavy duty fans w/ optimal fan speed control
7. 750W Redundant Power Supplies **Platinum Level (94%+)**

Specifications

Product SKUs

- SYS-6019U-TN4RT** ■ SuperServer 6019U-TN4RT (Black)

Motherboard

Super X11DPU

Processor/Cache

- CPU** ■ Dual Socket P (LGA 3647)
 ■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡], Dual UPI up to 10.4GT/s
 ■ Support CPU TDP 70-205W

- 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).

Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

System Memory

- Memory Capacity** ■ 24 DIMM slots
 ■ Up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM
 ■ Supports Intel® Optane™ DCPMM^{††}

- Memory Type** ■ 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
 ■ 2666 ECC DDR4 NVDIMM

- Note** [†] 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.

On-Board Devices

- Chipset** ■ Intel® C621 chipset

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

- Network Connectivity** ■ 2x 10GBase-T ports via (AOC-UR-I2XT)

- IPMI** ■ Support for Intelligent Platform Management Interface v.2.0
 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

- Graphics** ■ ASPEED AST2500 BMC

Input / Output

- SATA/NVMe** ■ 4 SATA3 (6Gbps)/NVMe ports

- LAN** ■ 2 RJ45 10GBase-T Ethernet ports
 ■ 1 RJ45 Dedicated IPMI LAN port

- USB** ■ 3 USB 3.0 ports (2 rear, 1 Type A)

- Video** ■ 2 VGA ports (1 rear, 1 onboard)

Chassis

- Form Factor** ■ 1U Rackmount

- Model** ■ CSE-819UTS-R751P-T

Dimensions and Weight

- Height** ■ 1.7" (43mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 29.7" (754mm)

- Weight** ■ Net Weight: 26 lbs (11.8 kg)
 ■ Gross Weight: 41 lbs (18.6 kg)

- Available Color** ■ Black

Front Panel

- Buttons** ■ Power On/Off button
 ■ System Reset button

- LEDs** ■ Power LED
 ■ Hard drive activity LED
 ■ Network activity LEDs
 ■ System Overheat LED / Fan fail LED / UID LED

Expansion Slots

- PCI-Express** ■ 2 PCI-E 3.0 x16 (Full-height, 10.5" L)
 ■ 2 PCI-E 3.0 x8 (1 LP, 1 internal LP)

(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and [AOC Support](#) for details.)

Drive Bays / Storage

- Hot-swap** ■ 4 Hot-swap 3.5" drive bays:
 4 NVMe/SATA3 hybrid ports (optional SAS3 via AOC)

- M.2** ■ 1 M.2 PCI-E 3.0 x4 M-Key NVMe (2240/2260/2280/22110) or 1 M.2 M-Key SATA3 (2240/2260/2280/22110) via optional parts
 ■ 2 M.2 PCI-E 3.0 x4 M-Key NVMe (2260/2280/22110) via optional add-on card AOC-SLG3-2M2

System Cooling

- Fans** ■ 8 Heavy duty fans with optimal fan speed control

- Air Shroud** ■ 1 Air Shroud

Power Supply

750W Redundant AC-DC Power Supplies, +12V/+12Vsb output

- AC Input** ■ 100-127Vac, 50-60Hz
 ■ 200-240Vac, 50-60Hz

- +12V** ■ Max: 62.5A & Min: 0A (100Vac-127Vac)
 ■ Max: 62.5A & Min: 0A (200Vac-240Vac)

Serial Port	<ul style="list-style-type: none"> 1 Serial header
DOM	<ul style="list-style-type: none"> 2 SATA <u>DOM</u> (Disk on Module) support with embedded power

System BIOS

BIOS Type	<ul style="list-style-type: none"> AMI 32Mb SPI Flash ROM
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Management

Software	<ul style="list-style-type: none"> Intel® Node Manager <u>IPMI 2.0</u> KVM with dedicated LAN NMI <u>SSM, SPM, SUM</u> <u>SuperDoctor® 5</u>
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Power Configurations	<ul style="list-style-type: none"> ACPI Power Management
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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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12V SB	<ul style="list-style-type: none"> Max: 2.1A Min: 0A
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Certification		Platinum Level
[Test Report]		

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 70°C (-40°F to 158°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-X11DPU	1	Super X11DPU Motherboard
	CSE-819UTS-R751P-T	1	1U Chassis
Add-on Card / Module	AOC-UR-I2XT	1	1U Ultra Riser based on Intel X540 controller with 2 10Gbase-T ports and 1 internal PCI-E x8 3.0 slot
Backplane	BPN-SAS3-815TQ-N4	1	4-port 1U SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
Cable 2	CBL-SAST-0819	4	OCuLink v 1.0,INT,PCIe NVMe SSD, 65CM,34AWG,RoHS/REACH
Cable 3	CBL-SAST-0880	1	MINI SAS(RA-RS EXIT)-4 SATA,INT,55/55/55/55CM,55CM SB,30AWG
FAN 1	FAN-0101L4	8	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
Drive Tray(s)	MCP-220-00138-0B	4	Black gen-5.5 tool-less NVMe 3.5-to-2.5 drive tray, Orange tab
Rear Window	MCP-240-81909-0N	1	Ultra I/O Rear Window for SC819U, 119U-T tool-less chassis(i2XT)
Air Shroud	MCP-310-81910-0N	1	Plastic air shroud for SC819U, 119U (X11 24DIMM, left side)
Air Shroud	MCP-310-81911-0N	1	Plastic air shroud for SC819U, 119U (X11 24DIMM, right side)
Riser Card	RSC-R1UW-2E16	1	1U LHS WIO Riser card with two PCI-E x16 slots
Riser Card	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 PCIE/SATA Hybrid M.2 & 1 PCIE
Heatsink / Retention	SNK-P0067PS	2	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
* Power Supply	PWS-751P-1R	2	1U 750W Redundant Platinum Single Output Power Supply w/Pmbus W73.5xH40xL203mm,RoHS/REACH

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
Ultra Platform CPRS Power Supply	PWS-1K02A-1R	2	1U 800/1000W Redundant Titanium PSU CRPS 73.5x203x40mm
	PWS-1K22A-1R	2	1U 1200W/800W Redundant Titanium PSU CRPS 73.5x203x40mm
	PWS-1K62A-1R	2	1U 1000W/1600W Redundant Titanium PSU CRPS 73.5x203x40mm
	PWS-1K30D-1R	2	1U 1300W -48Vdc Redundant PSU
	CBL-PWEX-0710-JP	2	-48V DC Input PSU 400cm Cable, Positronic CBD Connector
Add-on card for internal M.2 NVMe	AOC-SLG3-2M2	1	Low Profile PCIe x8 add-on card supports 2 PCI-E 3.0 x4 M.2 NVMe Modules
Cable for internal M.2 SATA	CBL-SAST-0538	1	29cm 30AWG SATA S-RA cable
3.5" SATA/SAS Drive Tray Hot-swap 3.5" to 2.5" SATA/SAS Drive Trays	MCP-220-00075-0B	1~4	Black hot-swap 3.5" drive tray (Red tab, w/ hollow dummy)
	MCP-220-00118-0B		Tool-less black hot-swap 3.5-to-2.5 converter drive tray (Red tab)
	MCP-220-00043-0N		Black hot-swap 3.5-to-2.5 converter drive tray (Red tab)
DVD-ROM / DVD-RW	DVM-TEAC-DVD-SBT4 DVM-TEAC-DVDRW-SBT4 DVM-PLDS-DVDRW-SBT5 & CBL-0161L & CBL-PWEX-0702	1	SLIM DVD-ROM / DVD-RW SATA DRIVE
DVD-ROM / DVD-RW Installation Kit	MCP-220-81502-0N	1	Slim SATA DVD kit
Hot-Swap 2.5" Slim HDD Tray (FDD Slot)	MCP-220-81504-0N & CBL-0161L & CBL-PWEX-0702	1	12G 2.5" Hot-swap Slim Floppy Size Drive Kit w/Status LED

Hot-Swap 2.5" Slim HDD Tray (DVD Slot)	MCP-220-81506-0N & CBL-0161L & CBL-PWEX-0702	1	12G 2.5" Hot-swap Slim DVD Size Drive Kit with Status LED
USB Port Tray (FDD Slot)	MCP-220-00129-0B	1	Black 2x USB 3.0 port tray in slim FDD bay
Internal Drive Tray for Two 2.5" Drives	MCP-120-82916-0N	1	Internal drive plate Supports Two 2.5" Drive, PCI slots
	CBL-PWEX-0650	1	Power cable for Two internal 2.5" drives
	CBL-0080L	2	
	CBL-0484L Or	2	SATA3 S-S Cable
	CBL-SAST-0654 Or	1	miniSAS(iPass) to 4 SATA Cable
	CBL-SAST-0948	1	miniSAS HD to 4 SATA Cable
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 1x CBL-SAST-0948	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; MINI SAS HD,12G,INT,60CM,30AWG
	AOC-S3008L-L8i & 1x CBL-SAST-0948		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; MINI SAS HD,12G,INT,60CM,30AWG
	AOC-S3108L-H8iR & 1x CBL-SAST-0948		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; MINI SAS HD,12G,INT,60CM,30AWG
	AOC-S3108L-H8iR-16DD & 1x CBL-SAST-0948		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 5, 6, 10, 50, 60; MINI SAS HD,12G,INT,60CM,30AWG
Network Card(s)	AOC-SGP-i2/4	-	Standard LP, 2/4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STGN-i1S/i2S	-	Standard LP, 1/2x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STGF-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel XL710-BM2
	AOC-STG-i4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Intel XL710
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
	AOC-STGS-i1/2T	-	Standard LP, 1/2x 10GbE RJ45, PCI-E x8, Intel X550
	AOC-STG-i4T	-	Standard LP, 4x 10GbE RJ45, PCI-E x8, Intel XL710
	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB
	AOC-S25G-m2S	-	Standard LP, 2x 25GbE SFP28, Mellanox ConnectX-4 LX EN
	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, Intel Fortville XL710
	More	-	AOC Compatibility Matrix
	CacheVault(s)	BTR-CV3108-1U1	-
BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05		-	40x56 fan tray CacheVault for Broadcom 3108; Supercap mounting bracket for PCI-E location
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00043-0N	-	Black hot-swap 3.5" to 2.5" HDD tray
1U Cable Management Arm	MCP-290-00152-0N	1	1U Supermicro Cable Management Arm 2nd Gen
TPM security module	AOM-TPM-9670H-S	1	TCG 2.0 compliant trusted platform module (TPM), Horizontal FF
	AOM-TPM-9671H-S	1	TCG 1.2 compliant trusted platform module (TPM), Horizontal FF
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
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)