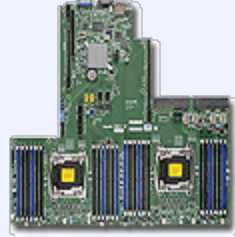


SuperServer 1028U-TNRTP+ (Complete System Only)



Integrated Board



X10DRU-i+

Due to the complexity of integration, this product is sold as completely assembled systems only (including but not limited to CPUs, memory, and HDDs). Please contact your Supermicro sales rep for special requirements.

Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v3 family; QPI up to 9.6GT/s
2. Up to 1.5TB ECC, up to DDR4 2133MHz; 24x DIMM slots
3. 2x PCI-E 3.0 x16 slots (FH, 10.5" L), 2x PCI-E 3.0 x8 slots (LP, 1 internal)
4. 2x 10G SFP+ ports
5. 10x Hot-swap 2.5" Drive Bays: Default 8x SATA3 ports and 2x NVMe/SATA3 hybrid ports; Optional 8x SAS3 ports via AOC
6. 5x heavy duty fans w/ optimal fan speed control
7. 750W Redundant Power Supplies **Platinum Level (94%+)**

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

Specifications

Product SKUs

- SYS-1028U-TNRTP+** ■ SuperServer 1028U-TNRTP+ (**Black**)

Motherboard

Super X10DRU-i+

Processor/Cache

- CPU** ■ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP) *
■ Dual Socket R3 (LGA 2011)

- Cores / Cache** ■ Up to 18 Cores / Up to 45MB Cache

- System Bus** ■ QPI up to 9.6 GT/s

Note * Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

System Memory

- Memory Capacity** ■ 24x 288-pin DDR4 DIMM slots
■ Up to 1.5TB ECC LRDIMM, RDIMM
- Memory Type** ■ 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit

Chassis

- Form Factor** ■ 1U Rackmount
- Model** ■ **CSE-119UAC2-R750**

Dimensions and Weight

- Height** ■ 1.7" (43mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 27.82" (707mm)
- 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
■ 2x Network activity LEDs
■ System Overheat LED / Fan fail LED / UID LED

Expansion Slots

- 2x PCI-E 3.0 x16 slots (Full-height, 10.5" L)

DIMM Sizes	<ul style="list-style-type: none"> 64GB, 32GB, 16GB, 8GB, 4GB
Memory Voltage	<ul style="list-style-type: none"> 1.2 V
Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors

On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C612 chipset
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps) with RAID 0, 1, 5, 10
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 ASPEED AST2400 BMC
Network Connectivity	<ul style="list-style-type: none"> 2x 10G SFP+ ports via AOC-URN2-I2XS Intel® 82599ES 10G SFP+ 1x Realtek RTL8211E PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output

SATA	<ul style="list-style-type: none"> 10x SATA3 (6Gbps) ports
SAS	<ul style="list-style-type: none"> 8x SAS3 ports support via optional Add-on Card
NVMe	<ul style="list-style-type: none"> 2x NVMe ports
LAN	<ul style="list-style-type: none"> 2x 10G SFP+ ports 1x RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 5x USB 3.0 ports (2 rear, 2 front panel, 1 Type A)
Video	<ul style="list-style-type: none"> 1x VGA Connector
Serial Port	<ul style="list-style-type: none"> 1x Serial header

System BIOS

BIOS Type	<ul style="list-style-type: none"> 128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	<ul style="list-style-type: none"> Plug and Play (PnP) APM 1.2 PCI 2.3 ACPI 1.0 / 2.0 / 3.0 / 4.0 USB Keyboard support SMBIOS 2.7.1 UEFI 2.3.1

Management

Software	<ul style="list-style-type: none"> SuperDoctor® 5 Intel® Node Manager 3.0 Watch Dog NMI SMCBBU and SMM Optional IPMI 1.5 / 2.0
Power Configurations	<ul style="list-style-type: none"> ACPI Power Management Power-on mode for AC power recovery

- 2x PCI-E 3.0 x8 slots (Low-profile, 1 internal)

PCI-Express

(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

Hot-swap	<ul style="list-style-type: none"> 10x 2.5" Hot-swap drive bays Default 8x SATA3 ports and 2x NVMe/SATA3 hybrid ports Optional 8x SAS3 ports via AOC
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System Cooling

Fans	<ul style="list-style-type: none"> 5x heavy duty fans with optimal fan speed control 3x additional fans optional
Air Shroud	<ul style="list-style-type: none"> 1x Air Shroud

Power Supply

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

AC Input	<ul style="list-style-type: none"> 100-127Vac, 50-60Hz 200-240Vac, 50-60Hz
+12V	<ul style="list-style-type: none"> Max: 62.5A & Min: 0A (100Vac-127Vac) Max: 62.5A & Min: 0A (200Vac-240Vac)
12V SB	<ul style="list-style-type: none"> Max: 2.1A Min: 0A

Certification	  Platinum Level [Test Report]
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PC Health Monitoring

Voltage	<ul style="list-style-type: none"> Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages. 5+1 Phase-switching voltage regulator
FAN	<ul style="list-style-type: none"> 8x 4-pin fan headers Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	<ul style="list-style-type: none"> Support to monitor Supermicro AOC temperatures from IPMI or SD 5 Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 8x Fan Connectors Thermal Monitor 2 (TM2) support PECI
LED	<ul style="list-style-type: none"> Memory DIMM ECC error LEDs CPU / System Overheat LED Suspend static indicator LED UID/Remote UID
Other Features	<ul style="list-style-type: none"> 4x 8-pin GPU power connectors Chassis intrusion detection Chassis intrusion header SDDC Support RoHS

Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> RoHS Compliant
Environmental	<ul style="list-style-type: none"> Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)

Spec.

- 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-X10DRU-i+	1	Super X10DRU-i+ Motherboard
	CSE-119UAC2-R750	1	CSE-119UAC2-R750 Chassis
Air Shroud	MCP-310-81903-0B	1	Mylar air shroud set for SC819U,119U (X10DRU+),HF
Add-on Card / Module	AOC-URN2-I2XS	1	1U Ultra Riser based on Intel 82599ES controller with 2 10Gb SFP+ ports, 2 NVMe ports, and 1 internal PCI-E x8 3.0 slot
Backplane	BPN-SAS3-116A-N2	1	10-Port 1U Backplane for 8x2.5" SAS3/SATA3 HDD/SSD and 2xSAS2/SATA3 HDD/SSD or NVMe SSD
Cable 1	CBL-PWEX-0653	1	8 pin female to 4 pin female power, 37cm, 18AWG,RoHS/REACH
Cable 2	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
Cable 3	CBL-SAST-0658	2	Internal Mini-SAS HD cable for PCIe SSD NVMe, 12Gb/s, 60cm,30AWG,RoHS/REACH
Cable 4	CBL-0484L	2	55cm 30AWG SATA S-S cable
Cable 5	CBL-CDAT-0662	1	8 pin to 8 pin round SGPIO cable, 61.5cm, 28AWG, pinout 1-1,RoHS/REACH
Cable 6	CBL-SAST-0655	1	Internal RA side exit (right) miniSAS to miniSAS HD 47cm w/ SB, 30AWG,RoHS/REACH
Cable 7	CBL-SAST-0656	1	Internal RA side exit (right) miniSAS to miniSAS HD 39cm w/ SB, 30AWG,RoHS/REACH
Parts	MCP-120-81905-0N	1	Internal AOC bracket for SC819U, 119U (Type-2)
Drive Tray(s)	MCP-220-00127-0B	2	Black gen-3 2.5 NVMe drive tray, Orange tab with lock (for hotswap NVMe drive),HF,RoHS/REACH
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1678-QRG	1	SYS-1028U-TR(4/4T/T/TP)+, QRG,HF,RoHS/REACH
Parts	MCP-150-00009-0B	1	Internal AOC rubber support for SC819U, 119U
Riser Card	RSC-R1UW-2E16	1	RSC-R1UW-2E16-O-P
Riser Card	RSC-R1UW-E8R	1	RSC-R1UW-E8R-O-P
Rear Window	MCP-240-81910-0N	1	Rear window for SC819U, 119U tool-less chassis (i2XS)
Heatsink / Retention	SNK-P0047PS	2	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Fan	FAN-0101L4	1	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
Power Supply	PWS-751P-1R	2	1U 750W Redundant Platinum Single Output Power Supply w/Pmbus W73.5xH40xL203mm,RoHS/REACH
Mounting Rails	MCP-290-00102-0N	1	Outer rail, quick-release type, 25.6" to 33.05"
	MCP-290-00120-0N	1	Inner rail, front, quick-release type (thumb screw applied)
	MCP-290-00112-0N	1	Inner rail, extension, long (quick) for 1U 17.2"W chassis

Optional Parts List			
	Part Number	Qty	Description
Mounting Rails	MCP-290-00062-0N	-	Inner/outer rail set, quick-release type, 25.6" to 33.05"
	MCP-290-00064-0N	-	Thumb screw adapter of inner rail for 1U 17.2"
	MCP-290-00052-0N-BULK	-	Bulk outer rail, quick-release type, 25.6" to 33.05" (10 sets/pack)
10GbE SFP+ Direct Attach Cable (DAC, copper wire)	CBL-0347L	-	1M 10G SFP+ to SFP+ Passive Copper M-M Pull type 30AWG
	CBL-0348L	-	3M 10G SFP+ to SFP+ Passive Copper M-M Pull type 24AWG
	CBL-0349L	-	5M 10G SFP+ to SFP+ Passive Copper M-M Pull type 24AWG
	CBL-NTWK-0347	-	1M 10G SFP+ to SFP+ Passive Copper M-M Push type 30AWG
	CBL-NTWK-0456	-	2M 10G SFP+ to SFP+ Passive Copper M-M Push type 30AWG
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 2x CBL-SAST-0593	-	Std LP, 8 internal 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 internal 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 internal 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
Network Card(s)	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	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
	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB
CacheVault(s)	BTR-CV3108-1U1	-	CacheVault for LSI 3108 with Supercap mounting in 1U 40x56 fan tray
	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for LSI 3108; Supercap mounting bracket for PCI-E location
	BTR-TFM8G-LSICVM02 & MCP-240-00127-0N	-	CacheVault for LSI 3108; Supercap mounting bracket for 2.5" HDD location
Fan	FAN-0101L4	Up to 3	40x40x56 mm, 14.4K-10.7K RPM Counter-rotating Cooling Fan
Onsite Service Program	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
Onsite Service Program	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)