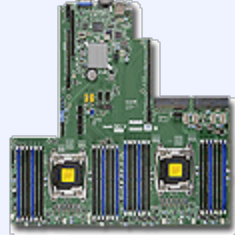


SuperServer 1028U-TNRT+ (Complete System Only)



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 10GBase-T 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. 4x 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-TNRT+	▪ SuperServer 1028U-TNRT+ (Black)
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Motherboard

Super X10DRU-i+

Processor/Cache

CPU	▪ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP **) ▪ Dual Socket R3 (LGA 2011)
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Cores / Cache	▪ Up to 18 Cores / Up to 45MB Cache
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System Bus	▪ QPI up to 9.6 GT/s
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Note ** Please contact your Supermicro sales representative for additional details.

System Memory

Memory Capacity	▪ 24x 288-pin DDR4 DIMM slots ▪ Up to 1.5TB ECC LRDIMM, 768GB ECC 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)
Gross Weight	▪ 48 lbs (21.8 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"> RDIMM: 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB
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Memory Voltage	<ul style="list-style-type: none"> 1.2 V
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Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors
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On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C612 Express chipset
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SATA	<ul style="list-style-type: none"> SATA3 (6Gbps) with RAID 0, 1, 5, 10
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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 ASPEED AST2400 BMC
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Network Connectivity	<ul style="list-style-type: none"> 2x 10GBase-T ports
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Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC
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Input / Output

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

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

Software	<ul style="list-style-type: none"> SuperDoctor® 5 Intel® Node Manager 3.0 Watch Dog NMI SMCBU and SMM Optional IPMI 1.5 / 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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- 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
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Air Shroud	<ul style="list-style-type: none"> 1x Air Shroud
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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
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+12V	<ul style="list-style-type: none"> Max: 62.5A & Min: 0A (100Vac-127Vac) Max: 62.5A & Min: 0A (200Vac-240Vac)
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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]
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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
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FAN	<ul style="list-style-type: none"> 8x 4-pin fan headers Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
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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
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LED	<ul style="list-style-type: none"> Memory DIMM ECC error LEDs CPU / System Overheat LED Suspend static indicator LED UID/Remote UID
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Other Features	<ul style="list-style-type: none"> 4x 8-pin GPU power connectors Chassis intrusion detection Chassis intrusion header SDDC Support RoHS
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Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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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)
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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-310-11803-0N	1	Air Shroud for Air X9DRG/X10DRG boards in CSE-118GH-R1K66B
Backplane	BPN-SAS3-116A-N2	1	Backplane support 8x 2.5" SAS2/SAS3/SATA3 HDD/SSD on device ID[1-8], with SGPIO. Support 2x 2.5" PCIe NVMe SSD on device ID[9-10] - with PCIe x1,x2,x4 support, max 25W/slot.,RoHS/REACH,PBF
Cable 1	CBL-0484L	2	55cm 30AWG SATA S-S cable
Cable 2	CBL-CDAT-0662	1	8 pin to 8 pin round SGPIO cable, 61.5cm, 28AWG, pinout 1-1,RoHS/REACH
Cable 3	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
Cable 4	CBL-SAST-0655	1	Internal RA side exit (right) miniSAS to miniSAS HD 47cm w/ SB, 30AWG,RoHS/REACH
Cable 5	CBL-SAST-0656	1	Internal RA side exit (right) miniSAS to miniSAS HD 39cm w/ SB, 30AWG,RoHS/REACH
Cable 6	CBL-SAST-0658	2	Internal Mini-SAS HD cable for PCIe SSD NVMe, 12Gb/s, 60cm,30AWG,RoHS/REACH
Cable 7	CBL-PWEX-0653	1	8 pin female to 4 pin female power, 37cm, 18AWG,RoHS/REACH
Riser Card	RSC-R1UW-E8R	1	RSC-R1UW-E8R-O-P
Riser Card	RSC-R1UW-2E16	1	RSC-R1UW-2E16-O-P
Heatsink / Retention	SNK-P0047PS	2	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-750P-1R	2	1U 750W CRPS, +12V/+12Vsb output, 80-plus Platinum AC-DC Power Supply Module (185x74x40mm),RoHS/REACH,PBF
Cable 8	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
Cable 9	CBL-0335L	1	FRONT CTL CABLE 20 PIN TO 20 PIN W/TUBE,73CM,PBF. 28AWG
Drive Tray(s)	MCP-220-00047-0B	10	Black gen 3rd hot-swap 2.5inch HDD tray
Fan 1	FAN-0101L4	4	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808

Optional Parts List

	Part Number	Qty	Description
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s
	AOC-S3008L-L8i & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s
	AOC-S3108L-H8iR & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,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®
	AOC-STGN-i2S	-	BCM57840S
	AOC-STGN-i1S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel® 82599ES
	AOC-STG-i2T	-	SStandard LP, 1x 10GbE SFP+, PCI-E x8, Intel® 82599EN
AOC-STG-i2	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel® X540 Standard LP, 2x 10GbE CX4, PCI-E x8, Intel® 82598EB	

CacheVault(s)	BTR-TFM8G-LSICVM02 BTR-CV3108-1U1	- -	CacheVault for LSI 3108 (LSICVM02) LSI 3108 CacheVault 1U dummy fan kit
CacheVault Installation Kits	MCP-240-00127-0N BKT-BBU-BRACKET-05	- -	SuperCap installation kit for thick 2.5" HDD location SuperCap installation kit for PCI-E 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)