

SuperServer 1028U-TN10RT+ (Complete System Only)



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. 3x PCI-E 3.0 x8 slots (2x FH 10.5" L, 1x LP)
4. 2x 10GBase-T ports
5. 10x 2.5" Hot-swap Drive Bays: 6x NVMe ports (NVMe from CPU 1); 4x NVMe/SAS3 hybrid ports for optional SAS3/SATA3 (NVMe from CPU 2)
6. 8x heavy duty fans w/ optimal fan speed control
7. 1000W Redundant Power Supplies Titanium Level (96%)

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-TN10RT+	▪ SuperServer 1028U-TN10RT+ (Black)
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Motherboard

Super X10DRU-i+

Processor/Cache

CPU	▪ Intel® Xeon® processor E5-2600 v3 family (up to 160W 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 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
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Chassis

Form Factor	▪ 1U Rackmount
Model	▪ CSE-119UAC2-R1K02

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 UID button
LEDs	▪ Power LED ▪ Hard drive activity LED ▪ 2x Network activity LEDs ▪ UID LED

Expansion Slots

	▪ 3x PCI-E 3.0 x8 slots (2x Full-height 10.5" L; 1x Low-profile)
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Memory Type	<ul style="list-style-type: none"> 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
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 10GBase-T ports via AOC-URN6-i2XT Intel® X540 10GBase-T 1x Realtek RTL8211E PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output

NVMe/SAS	<ul style="list-style-type: none"> 6x NVMe ports (NVMe from CPU 1) 4x NVMe/SAS3 Hybrid ports (NVMe from CPU 2)
LAN	<ul style="list-style-type: none"> 2x RJ45 10GBase-T ports 1x RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 5x USB 3.0 ports (2 rear, 2 front, 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 SMCBU 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

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 6x NVMe ports (NVMe from CPU 1) 4x NVMe/SAS3 hybrid ports for optional SAS3/SATA3 (NVMe from CPU 2)
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System Cooling

Fans	<ul style="list-style-type: none"> 8x heavy duty fans with optimal fan speed control
Air Shroud	<ul style="list-style-type: none"> 1x Air Shroud

Power Supply with Digital Switching Control

1000W Redundant Titanium Level (96%) Single Output Power Supplies	
AC Input	<ul style="list-style-type: none"> 100-127 V, 50-60 Hz 200-240 V, 50-60 Hz
+12V	<ul style="list-style-type: none"> Max: 62.5A & Min: 0A (100Vac-127Vac) Max: 83A (200Vac-240Vac) & Min: 0A
12V SB	<ul style="list-style-type: none"> Max: 2.1A Min: 0A

Certification	 Titanium 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 Spec.	<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) Operating Relative Humidity: 8% to 90% (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-URN6-I2XT-P	1	AOC-URN6-I2XT
Backplane	BPN-SAS3-116A-N10	1	10-Port Hybrid Backplane Supports 6 x 2.5" NVMe/PCIe SSD and 4 x 2.5" NVMe/SAS/SATA Storage Devices
Parts	MCP-130-81901-0N	1	Oculink cable connection plastic holder for AOC-URN6-i2XT
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1812-QRG	1	QRG for SYS-1028U-TN10RT+
Riser Card	RSC-UN4-88	1	RSC-UN4-88
Riser Card	RSC-R1UW-E8R	1	RSC-R1UW-E8R-O-P
Heatsink / Retention	SNK-P0057PSU	2	1U Passive CPU Heat Sink for X10 1U 24-DIMM Ultra and Super Blade Series Servers,RoHS/REACH
Power Supply	PWS-1K02A-1R	2	1U 1000W Redundant Power Supply 73.5mm width Titanium Level,RoHS/REACH
Cable	CBL-PWEX-0780	1	PWR EXT,2X4F/P4.2 TO TWO 2X2F/P4.2,CPU(5,12V),40/40CM,18AWG,RoHS/REACH
Cable	CBL-PWEX-0781	1	PWR EXT,2X4F/P4.2 TO TWO 2X2F/P4.2,CPU(5,12V),65/65CM,18AWG,RoHS/REACH
Cable	CBL-SAST-0724	5	OCuLink,INT,PCIe NVMe SSD, 55CM,34AWG
Cable	CBL-SAST-0725	3	OCuLink,INT,PCIe NVMe SSD, 65CM,34AWG
Cable	CBL-CDAT-0728	2	4 Pin to 4 Pin I2C cable, 65cm, 26AWG, 4 wires, pinout 1-1, for vpp header(jnvi2c1),RoHS/REACH
Cable	CBL-SAST-0726	2	OCuLink,INT,PCIe NVMe SSD, 85CM,34AWG

Optional Parts List

	Part Number	Qty	Description
Storage Control Card and Cable(s)	AOC-S3008L-L8e	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
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
CachVault(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
Drive Tray(s)	MCP-220-00047-0B	-	Black gen 3rd hot-swap 2.5" HDD tray
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)