

SuperServer 1028R-WTNRT



Available Colors: Black

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 1TB Reg. ECC DDR4 2133MHz; 16x DIMM slots
3. 2x PCI-E 3.0 x16 (FHHL) slots
4. 10x Hot-swap 2.5" SAS/SATA HDD bays; 2x NVMe support
5. Intel® X540 Dual port 10GBase-T LAN
6. I/O ports: 2x SuperDOM, 1x VGA, 1x COM, 2x USB 3.0 (front), 4x USB 2.0 (rear)
7. 2x SuperDOM (Disk on Module) ports
8. 700W Redundant Power Supplies Platinum Level High-efficiency

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

Specifications

Product SKUs	
SYS-1028R-WTNRT	▪ SuperServer 1028R-WTNRT (Black)
Motherboard	
<u>Super X10DRW-NT</u>	
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	▪ 16x 288-pin DDR4 DIMM slots ▪ Up to 1TB ECC LRDIMM, 512GB ECC RDIMM
Memory	▪ 133/1866/1600MHz ECC DDR4 SDRAM

Chassis	
Form Factor	▪ 1U Rackmount
Model	▪ <u>CSE-116AC2-R706WB</u>
Dimensions and Weight	
Width	▪ 17.2" (437mm)
Height	▪ 1.7" (43mm)
Depth	▪ 23.5" (597mm)
Gross Weight	▪ 46 lbs (20.9kg)
Available Colors	▪ Black
Front Panel	
Buttons	▪ Power On/Off button ▪ UID button
LEDs	▪ Power status LED ▪ HDD activity LED ▪ 2x Network activity LEDs ▪ Universal Information (UID) LED
Expansion Slots	
PCI-Express	▪ 2x PCI-E 3.0 x16 full-height, half-length slots

DIMM Sizes	<ul style="list-style-type: none"> RDIMM: 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB
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); 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 Controllers	<ul style="list-style-type: none"> Intel® X540 Dual Port 10GBase-T Virtual Machine Device Queues reduce I/O overhead Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1x Realtek RTL8211E PHY (dedicated IPMI)
Video	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output

Serial ATA	<ul style="list-style-type: none"> 8 SATA3 (6 Gbps) ports and 2 NVMe/SATA3 hybrid ports
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"> 2x USB 3.0 ports (front via header) 4x USB 2.0 ports (rear)
Video	<ul style="list-style-type: none"> 1x VGA port
Serial Port / Header	<ul style="list-style-type: none"> 1x Fast UART 16550 header
DOM	<ul style="list-style-type: none"> 2x SuperDOM (Disk on Module) ports

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"> 6x 4-pin fan headers (up to 6 fans) 6x fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	<ul style="list-style-type: none"> 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"> CPU / System Overheat LED Suspend static indicator LED UID/Remote UID
Other Features	<ul style="list-style-type: none"> Chassis intrusion detection Chassis intrusion header SDDC Support RoHS

Drive Bays

Hot-swap	<ul style="list-style-type: none"> 8x SATA3 (6Gbps) ports and 2x NVMe/STAT3 hybrid ports (connected to onboard storage controller)
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Backplane

SAS/SATA HDD Backplane

System Cooling

Fans	<ul style="list-style-type: none"> 5x 4cm heavy-duty counter-rotating fans w/ air shroud and optimal fan speed control
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Power Supply

700W/750W Redundant AC-DC high-efficiency power supply with PMBus and I2C

AC Voltage	<ul style="list-style-type: none"> 700W: 100 - 140 V, 50-60 Hz 750W: 200 - 240V, 50-60 Hz
DC Output +5V standby	<ul style="list-style-type: none"> 3 Amp
DC Output +12V	<ul style="list-style-type: none"> 700W: 58 Amp @ 100-140V 750W: 62 Amp @ 200-240V

Certification	 Platinum Certified [Test Report]
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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 Watch Dog NMI IPMI 2.0 Intel Node Manager
Power Configurations	<ul style="list-style-type: none"> ACPI / APM Power Management Power-on mode for AC power recovery

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 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

Parts List

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRW-NT	1	Super X10DRW-NT Motherboard
	CSE-116AC2-R706WB	1	1U Chassis
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-SAST-0631	2	cross-over mini SAS HD to 4 SATA w/SB, S. 55cm. 30AWG,RoHS/REACH
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-0484L	2	55cm 30AWG SATA S-S cable
Cable 4	CBL-SAST-0590	2	Internal Mini-SAS HD to Mini-SAS HD for PCIe SSD, Internal Mini-SAS HD cablefor PCIe SSD NVMe, 12Gb/s, 70cm,30AWG
Riser Card	RSC-R1UW-2E16-O-P	1	RSC-R1UW-2E16-O-P
Heatsink / Retention	SNK-P0047PSC	1	1U Passive Front CPU Heat Sink w/ a Side Air Channel for X9, X10 Systems Equipped with a Narrow ILM MB
Heatsink / Retention	SNK-P0057PS	1	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-706P-1R	2	1U 750W redundant power width 54.5mm(Platinum),HF,RoHS/REACH,PBF
Rail Set	MCP-290-00063-0N	1 set	Rail set, quick/quick, default for 1U 17.2"W for SC113/SC116,RoHS/REACH

Optional Parts List

	Part Number	Qty	Description
Cable for Storage Controller Card Connection	CBL-0343L-01	1	IPASS to 4 SATA Cable, 30AWG 76/66/54/45CM, W/ 66CM
Rail Set	MCP-290-00063-0N	1 set	Rail set, quick/quick, for 1U 17.2"W SC113 (Note: this is additional set to the default set included w/ Chassis)
CachVault(s)	BTR-CV3108-1U1	-	LSI 3108 CacheVault 1U dummy fan kit
CacheVault Installation Kits	MCP-240-00127-0N	-	SuperCap installation kit for thick 2.5" HDD location
	BKT-BBU-BRACKET-05	-	SuperCap installation kit for PCI-E location
BBU for 2208	BTR-0022L-LSI00279	-	LSI00279 IBBU09 BATTERY BACKUP FOR SAS2208
Cable	CBL-SAST-0556	-	Internal mini SAS HD to 4 SATA, 90/90/75/75cm for 3108 or 3008 SAS3 cards
Cable	CBL-0388L-01	-	IPASS TO 4 SATA 75/75/90/90CM W/ 75cm SB. RA. 30AWG for 2208, 2108, 2008, SAS2 cards
Network Card(s)	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-SG-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel@82575EB
	AOC-SG-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel@82576EB
	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-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
Storage Controller Card(s)	AOC-S3008L-L8e	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 122HDD, HBA
	AOC-S3008L-L8i	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S2308L-L8e	-	Standard LP, 8 internal ports (6Gb/s) Gen-3, 122HDD, HBA
	AOC-S2308L-L8i	-	Standard LP, 8 internal ports (6Gb/s) Gen-3, 63HDD, RAID 0,1,1E
	AOC-S2208L-H8iR	-	Standard LP, 8 internal ports (6Gb/s) Gen-3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-SAS2LP-MV8	-	Standard LP, 8 internal ports (6Gb/s) Gen-2, HBA
	AOC-SAS2LP-H4iR	-	Standard LP, 4 internal & 4 external ports (6Gb/s) Gen-2, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-SAS2LP-H8iR	-	Standard LP, 8 internal ports (6Gb/s) Gen-2, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	Onsite Service Program	QS4HR3/2/1	-
Onsite Service Program	QSNBD3/2/1	-	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)