

# SuperServer 1028R-WC1RT



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 ECC DDR4 2133MHz; 16x DIMM sockets
3. 2x PCI-E 3.0 x16 (FHHL) slots
4. 10x Hot-swap 2.5" SAS/SATA HDD bays
5. SAS3 (12Gbps) via LSI 3108
6. Intel® X540 Dual port 10GBase-T
7. I/O ports: 2x SuperDOM, 1x VGA, 1x COM, 6x USB 3.0 (4 rear, 2 front)
8. Optional 2x 2.5" NVMe drives support
9. 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-WC1RT	<ul style="list-style-type: none"> <li>■ SuperServer 1028R-WC1RT (Black)</li> </ul>
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### Motherboard

Super X10DRW-iT

### Processor/Cache

CPU	<ul style="list-style-type: none"> <li>■ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP **)</li> <li>■ Dual Socket R3 (LGA 2011)</li> </ul>
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Cores / Cache	<ul style="list-style-type: none"> <li>■ Up to 18 Cores / Up to 45MB Cache</li> </ul>
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System Bus	<ul style="list-style-type: none"> <li>■ QPI up to 9.6 GT/s</li> </ul>
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Note	** Please contact your Supermicro sales representative for additional details.
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### System Memory

Memory Capacity	<ul style="list-style-type: none"> <li>■ 16x 288-pin DDR4 DIMM slots</li> <li>■ Up to 1TB ECC LRDIMM, 512GB ECC RDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>■ 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>■ RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>■ LRDIMM: 64GB, 32GB</li> </ul>

### Chassis

Form Factor	<ul style="list-style-type: none"> <li>■ 1U Rackmount</li> </ul>
Model	<ul style="list-style-type: none"> <li>■ CSE-116AC2-R706WB</li> </ul>

### Dimensions and Weight

Width	<ul style="list-style-type: none"> <li>■ 17.2" (437mm)</li> </ul>
Height	<ul style="list-style-type: none"> <li>■ 1.7" (43mm)</li> </ul>
Depth	<ul style="list-style-type: none"> <li>■ 23.5" (597mm)</li> </ul>
Gross Weight	<ul style="list-style-type: none"> <li>■ 46 lbs (20.9kg)</li> </ul>
Available Colors	<ul style="list-style-type: none"> <li>■ Black</li> </ul>

### Front Panel

Buttons	<ul style="list-style-type: none"> <li>■ Power On/Off button</li> <li>■ UID button</li> </ul>
LEDs	<ul style="list-style-type: none"> <li>■ Power status LED</li> <li>■ HDD activity LED</li> <li>■ 2x Network activity LEDs</li> <li>■ Universal Information (UID) LED</li> </ul>

### Expansion Slots

PCI-Express	<ul style="list-style-type: none"> <li>■ 2 PCI-E 3.0 x16 full-height, Half-length slots</li> </ul>
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### Drive Bays

Memory Voltage	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
Error Detection	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>
<b>On-Board Devices</b>	
Chipset	<ul style="list-style-type: none"> <li>Intel® C612 Chipset</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA3 via Intel® C610; RAID 0, 1</li> </ul>
SAS	<ul style="list-style-type: none"> <li>SAS3 (12Gbps) via LSI 3108</li> <li>RAID 0, 1, 5, 6, 10, 50, 60 support</li> <li>2GB DDR3 Cache</li> </ul>
IPMI	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> <li>ASPEED AST2400 BMC</li> </ul>
Network Controllers	<ul style="list-style-type: none"> <li>Intel® X540 Dual Port 10GBase-T</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> <li>1x Realtek RTL8211E PHY (dedicated IPMI)</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>
<b>Input / Output</b>	
Serial ATA	<ul style="list-style-type: none"> <li>2x SATA3 (6Gbps) ports</li> </ul>
SAS	<ul style="list-style-type: none"> <li>8x SAS3 (12Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2x RJ45 10GBase-T ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>6x USB 3.0 ports (4 rear + 2 via header)</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1x VGA port</li> </ul>
Serial Port / Header	<ul style="list-style-type: none"> <li>1x Fast UART 16550 header</li> </ul>
DOM	<ul style="list-style-type: none"> <li>2x SuperDOM (Disk on Module) ports</li> </ul>
<b>PC Health Monitoring</b>	
Voltage	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages.</li> <li>5+1 Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>6x 4-pin fan headers (up to 6 fans)</li> <li>6x fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Control for 8x Fan Connectors</li> <li>Thermal Monitor 2 (TM2) support</li> <li>PECI</li> </ul>
LED	<ul style="list-style-type: none"> <li>CPU / System Overheat LED</li> <li>Suspend static indicator LED</li> <li>UID/Remote UID</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>Chassis intrusion detection</li> <li>Chassis intrusion header</li> <li>SDDC Support</li> <li>RoHS</li> </ul>

Hot-swap	<ul style="list-style-type: none"> <li>10 Hot-swap 2.5" SAS / SATA HDD trays (connected to onboard storage controller)</li> </ul>
<b>Backplane</b>	
SAS/SATA HDD Backplane	
Optional 2x 2.5" NVMe drives	
<b>System Cooling</b>	
Fans	<ul style="list-style-type: none"> <li>5x 4cm heavy-duty counter-rotating fans w/ air shroud and optimal fan speed control</li> </ul>
<b>Power Supply</b>	
700W/750W Redundant AC-DC high-efficiency power supply with PMBus and I2C	
AC Voltage	<ul style="list-style-type: none"> <li>700W: 100 - 140 V, 50-60 Hz</li> <li>750W: 200 - 240V, 50-60 Hz</li> </ul>
DC Output +5V standby	<ul style="list-style-type: none"> <li>3 Amp</li> </ul>
DC Output +12V	<ul style="list-style-type: none"> <li>700W: 58 Amp @ 100-140V</li> <li>750W: 62 Amp @ 200-240V</li> </ul>
Certification	 <ul style="list-style-type: none"> <li>Platinum Certified (Cert. in progress)</li> </ul>
<b>System BIOS</b>	
BIOS Type	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI BIOS</li> </ul>
BIOS Features	<ul style="list-style-type: none"> <li>Plug and Play (PnP)</li> <li>APM 1.2</li> <li>PCI 2.3</li> <li>ACPI 1.0 / 2.0 / 3.0 / 4.0</li> <li>BIOS resume hot keys</li> <li>USB Keyboard support</li> <li>SMBIOS 2.7.1</li> <li>UEFI 2.3.1</li> </ul>
<b>Management</b>	
Software	<ul style="list-style-type: none"> <li>SuperDoctor® 5</li> <li>Watch Dog</li> <li>NMI</li> <li>IPMI 2.0</li> <li>Intel Node Manager</li> </ul>
Power Configurations	<ul style="list-style-type: none"> <li>ACPI / APM Power Management</li> <li>Power-on mode for AC power recovery</li> </ul>
<b>Operating Environment / Compliance</b>	
RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X10DRW-iT	1	Super X10DRW-iT Motherboard
	CSE-116AC2-R706WB	1	1U Chassis
<b>Backplane</b>	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
<b>Cable 1</b>	CBL-CDAT-0662	1	8 pin to 8 pin round SGPIO cable, 61.5cm, 28AWG, pinout 1-1,RoHS/REACH
<b>Cable 2</b>	CBL-SAST-0568	1	Internal Mini-SAS HD to Mini-SAS HD 35cm,30AWG,12Gb/s,HF,RoHS/REACH,PBF
<b>Cable 3</b>	CBL-0484L	2	55cm 30AWG SATA S-S cable
<b>Cable 4</b>	CBL-SAST-0550	1	Internal Mini-SAS HD to Mini-SAS HD 25cm,30AWG,HF,RoHS/REACH,PBF
<b>Riser Card</b>	RSC-R1UW-2E16-O-P	1	RSC-R1UW-2E16-O-P
<b>Heatsink / Retention</b>	SNK-P0047PSC	1	1U Passive Front CPU Heat Sink w/ a Side Air Channel for X9, X10 Systems Equipped with a Narrow ILM MB
<b>Heatsink / Retention</b>	SNK-P0057PS	1	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
<b>Power Supply</b>	PWS-706P-1R	2	1U 750W redundant power width 54.5mm(Platinum),HF,RoHS/REACH,PBF
<b>Add-on Module</b>	AOM-S3108M-H8-O-P	1	SAS3 (12Gbps) via LSI 3108 RAID controller

Optional Parts List			
	Part Number	Qty	Description
<b>Cable for Storage Controller Card Connection</b>	CBL-0343L-01	1	IPASS to 4 SATA Cable, 30AWG 76/66/54/45CM, W/ 66CM
<b>Cable</b>	CBLSAST-0590	-	Internal Mini-SAS HD cablefor PCIe SSD NVMe, 70cm,30AWG
<b>NVMe AOC card</b>	AOC-SLG3-2E4R	-	Standard LP, 2 internal NVMe ports, x4 per port, Gen-3
<b>CacheVault(s)</b>	BTR-TFM8G-LSICVM02	-	CacheVault for AOM LSI 3108 (LSICVM02)
<b>CacheVault Installation Kits</b>	MCP-240-00127-0N	-	SuperCap installation kit for thick 2.5" HDD location
	BKT-BBU-BRACKET-05	-	SuperCap installation kit for PCI-E location
<b>Network Card(s)</b>	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
<b>Storage Controller Card(s)</b>	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
<b>Onsite Service Program</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
<b>Onsite Service Program</b>	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	SFT-OOB-LIC	1	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	1	DataCenter Management Package (per node license)