

# SuperServer 1028R-WC1RT



## Integrated Board



## Super X10DRW-iT

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## Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family; QPI up to 9.6GT/s
2. Up to **2TB<sup>†</sup>** ECC 3DS LRDIMM , up to DDR4- **2400<sup>†</sup>**MHz ; 16x DIMM slots
3. 2x PCI-E 3.0 x16 (FHHL) slots
4. 10x Hot-swap 2.5" SAS/SATA HDD bays
5. SAS3 (12Gbps) via Broadcom 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. 750W Redundant Power Supplies **Platinum Level** High-efficiency

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

# Specifications

**Product SKUs - Discontinued SKU (EOL). Please contact sales-rep for alternative options.**

**SYS-1028R-WC1RT** ■ SuperServer 1028R-WC1RT (Black)

## Motherboard

**Super X10DRW-iT**

## Processor/Cache

**CPU** ■ Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family (up to 145W TDP) \*  
■ Dual Socket R3 (LGA 2011)

**Cores / Cache** ■ Up to **22 Cores**<sup>†</sup> / Up to **55MB**<sup>†</sup> Cache

**System Bus** ■ QPI up to 9.6 GT/s

**Note** † BIOS version 2.0 or above is required

**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 2TB<sup>†</sup> ECC 3DS LRDIMM/RDIMM

**Memory Type** ■ **2400**<sup>†</sup>/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit

**DIMM Sizes** ■ RDIMM: 32GB, 16GB, 8GB, 4GB  
■ LRDIMM: 64GB, 32GB  
■ 3DS LRDIMM: 128GB

**Memory Voltage** ■ 1.2 V

**Error Detection** ■ Corrects single-bit errors

## On-Board Devices

**Chipset** ■ Intel® C612 chipset

**SATA** ■ SATA3 via Intel® C610; RAID 0, 1

**SAS** ■ SAS3 (12Gbps) via Broadcom 3108  
■ RAID 0, 1, 5, 6, 10, 50, 60 support  
■ 2GB DDR3 Cache

**IPMI** ■ 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** ■ Intel® X540 Dual Port 10GBase-T  
■ Virtual Machine Device Queues reduce I/O overhead  
■ Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output  
■ 1x Realtek RTL8211E PHY (dedicated IPMI)

**Graphics** ■ ASPEED AST2400 BMC

## Input / Output

**Serial ATA** ■ 2x SATA3 (6Gbps) ports

**SAS** ■ 8x SAS3 (12Gbps) ports

## Chassis

**Form Factor** ■ 1U Rackmount

**Model** ■ **CSE-116AC2-R706WB**

## Dimensions and Weight

**Width** ■ 17.2" (437mm)

**Height** ■ 1.7" (43mm)

**Depth** ■ 23.5" (597mm)

**Weight** ■ Net Weight: 25.5 lbs (11.6 kg)  
■ Gross Weight: 39 lbs (17.7 kg)

**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** ■ 2 PCI-E 3.0 x16 full-height, Half-length slots

## Drive Bays

**Hot-swap** ■ 10 Hot-swap 2.5" SAS/SATA HDD trays (Default 8 SAS3, 2 SATA3)

## Backplane

SAS/SATA HDD Backplane  
Optional 2x 2.5" NVMe drives

## System Cooling

**Fans** ■ 5x 4cm heavy-duty counter-rotating fans w/ air shroud and optimal fan speed control

## AC/DC240V Input Redundant Power Supply

700W/750W Redundant Power Supplies with PMBus

**Total Output Power** ■ 700W/750W

**Dimension (W x H x L)** ■ 54.5 x 40.25 x 320 mm

**Input** ■ 100 - 140Vac / 8 - 6A / 50-60Hz  
■ 200 - 240Vac / 4.5 - 3.8A / 50-60Hz  
■ 200 - 240Vdc / 4.5 - 3.8A (CCC Only)

**+12V** ■ Max: 58A / Min: 0.5A (100 - 140Vac)  
■ Max: 62A / Min: 0.5A (200 - 240Vac)  
■ Max: 62A / Min: 0.5A (200 - 240Vdc) (CB/CCC Only)

**+5V sb** ■ Max: 3A / Min: 0A

**Output Type** ■ Gold Finger Connector Mating with Molex 45984-4343

<b>LAN</b>	<ul style="list-style-type: none"> <li>2x RJ45 10GBase-T ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>6x USB 3.0 ports (4 rear + 2 via header)</li> </ul>
<b>VGA</b>	<ul style="list-style-type: none"> <li>1x VGA port</li> </ul>
<b>Serial Port / Header</b>	<ul style="list-style-type: none"> <li>1x Fast UART 16550 header</li> </ul>
<b>DOM</b>	<ul style="list-style-type: none"> <li>2x SuperDOM (Disk on Module) ports</li> </ul>

#### PC Health Monitoring

<b>Voltage</b>	<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>
<b>FAN</b>	<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>
<b>Temperature</b>	<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>
<b>LED</b>	<ul style="list-style-type: none"> <li>System Information LED</li> <li>Suspend static indicator LED</li> <li>UID/Remote UID</li> </ul>
<b>Other Features</b>	<ul style="list-style-type: none"> <li>Chassis intrusion detection</li> <li>Chassis intrusion header</li> <li>SDDC Support</li> <li>RoHS</li> </ul>

#### Certification



**Platinum Certified**  
[ [Test Report](#) ]

#### System BIOS

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

#### Management

<b>Software</b>	<ul style="list-style-type: none"> <li><a href="#">SuperDoctor@ 5</a></li> <li>Watch Dog</li> <li>NMI</li> <li>IPMI 2.0</li> <li>Intel Node Manager</li> </ul>
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<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>ACPI / APM Power Management</li> <li>Power-on mode for AC power recovery</li> </ul>
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#### Operating Environment / Compliance

<b>RoHS</b>	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
<b>Environmental Spec.</b>	<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>Add-on Card / Module</b>	AOM-S3108M-H8	1	LSI3108, SAS-3/Gen-3 12Gb/ROC
<b>Backplane</b>	BPN-SAS3-116A-N2	1	10-port 1U SAS3 12Gbps Hybrid backplane, support up to 8x 2.5-inch SAS3/SATA3 HDD/SSD and 2x SAS3/SATA3/NVMe Storage Devices
<b>Cable 1</b>	CBL-SAST-0550	1	MINI SAS HD, 12G, INT, 25CM, 30AWG
<b>Cable 2</b>	CBL-0484L	2	SATA, INT, ROUND, ST-ST, 55CM, 30AWG
<b>Cable 3</b>	CBL-SAST-0568	1	MINI SAS HD, 12G, INT, 35CM, 30AWG
<b>Cable 4</b>	CBL-CDAT-0662	1	CBL, SGPIO, 2X4F TO 2X4F, P2.54, ROUND CABLE, 61.5CM, 28AWG
<b>Label</b>	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
<b>Manual</b>	MNL-1637-QRG	1	1028R-WC1R(T) QRG, HF
<b>Riser Card</b>	RSC-R1UW-2E16	1	1U LHS WIO Riser card with two PCI-E x16 slots
<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>Fan</b>	FAN-0101L4	5	40x56mm, 4 Pin PWM Fan
<b>Rail Set</b>	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
<b>NVMe Tray with Lock</b>	MCP-220-00127-0B	-	Black gen-3 2.5" NVMe drive tray, Orange tab with lock (for hotswap NVMe drive), HF, RoHS/REACH
<b>NVMe Controller Card &amp; Cable</b>	AOC-SLG3-2E4R & 2x CBL-SAST-0590	-	Supermicro 6.4GB/s dual-Port Gen-3 Internal NVMe Host Bus Adapter
<b>CacheVault(s)</b>	BTR-CV3108-1U1	1	CacheVault for Broadcom 3108 with SuperCap mounting in 1U 40x56 fan tray
	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3108; SuperCap mounting bracket for PCI-E location
	BTR-TFM8G-LSICVM02 & MCP-240-00127-0N	-	CacheVault for Broadcom 3108; SuperCap mounting bracket for 2.5" HDD 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 x8, 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>Front Bezel</b>	MCP-210-11601-0B	1	Black Front Bezel for SC113, SC113M, SC116, SC119, SC119U, SC514 (No LED indicator support)
<b>Global Services &amp; Support</b>	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
<b>Software</b>	<u>SFT-OOB-LIC</u> • eStore	1	OOB Management Package (per node license)
<b>Software</b>	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)