

SuperServer 1028R-WTRT



Integrated Board



Super X10DRW-iT

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Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4†/ v3 family; QPI up to 9.6GT/s
2. Up to **2TB**[†] ECC 3DS LRDIMM , up to DDR4- **2400**[†]MHz ; 16x DIMM slots
3. 2 PCI-E 3.0 x16 (FHHL), 1 PCI-E 3.0 x8 Mezzanine for HBA cards
4. 10 Hot-swap 2.5" SAS/SATA HDD bays (default 10 SATA3)
5. Intel® X540 Dual port 10GBase-T
6. I/O ports: 2 SuperDOM, 1 VGA, 1 COM, 6 USB 3.0 (4 rear, 2 front)
7. 2 SuperDOM (Disk on Module) ports
8. 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

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

Motherboard

Super X10DRW-iT

Processor/Cache

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

- Cores / Cache** ■ Up to **22 Cores**[†] / Up to **55MB**[†] 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[†] ECC 3DS LRDIMM/RDIMM

- Memory Type** ■ **2400**[†]/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit

- DIMM Sizes** ■ RDIMM: 64GB, 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 (6Gbps); RAID 0, 1, 5, 10

- 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 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output
 - 1x Realtek RTL8211E PHY (dedicated IPMI)

- Video** ■ ASPEED AST2400 BMC

Input / Output

- Serial ATA** ■ 10x SATA3 (6Gbps) ports

- LAN** ■ 2x RJ45 10GBase-T ports
 - 1x RJ45 Dedicated IPMI LAN port

- USB** ■ 6x USB 3.0 ports (4 rear + 2 via header)

- Video** ■ 1x VGA port

Chassis

- Form Factor** ■ 1U Rackmount

- Model** ■ **CSE-116TQ-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** ■ 2x PCI-E 3.0 x16 full-height, Half-length slots

Drive Bays

- Hot-swap** ■ 10x Hot-sw ap 2.5" SAS / SATA HDD trays (default 10 SATA connected to onboard storage controller)

Backplane

- SAS/SATA HDD Backplane

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

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"> System Information 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

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

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRW-IT	1	Super X10DRW-iT Motherboard
	CSE-116TQ-R706WB	1	1U Chassis
Backplane	BPN-SAS-116TQ	1	10-port 1U TQ (W/ AMI 9072) backplane, support up to 10x 2.5-inch SAS/SATA HDD/SSD
Cable 1	CBL-CDAT-0660	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,ROUND CABLE,27CM,28AWG
Cable 2	CBL-SAST-0641	2	SATA,INT,ROUND,ST-RA,45CM,30AWG
Cable 3	CBL-0488L	2	SATA,INT,ROUND,ST-RA,55CM,30AWG
Cable 4	CBL-CDAT-0662	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,ROUND CABLE,61.5CM,28AWG
Cable 5	CBL-SAST-0639	2	SATA,INT,ROUND,ST-RA,31CM,30AWG
Cable 6	CBL-0483L	2	SATA,INT,ROUND,ST-ST,29CM,30AWG
Cable 7	CBL-CDAT-0661	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,ROUND CABLE,40CM,28AWG
Cable 8	CBL-SAST-0640	2	SATA,INT,ROUND,ST-RA,38CM,30AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1634-QRG	1	1028R-WTR(T) QRG,HF
Riser Card	RSC-R1UW-2E16	1	1U LHS WIO Riser card w ith tw o PCI-E x16 slots
Heatsink / Retention	SNK-P0047PSC	1	1U Passive Front CPU Heat Sink w / a Side Air Channel for X9, X10 Systems Equipped w ith 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 pow er w idth 54.5mm(Platinum),HF,RoHS/REACH,PBF
Fan	FAN-0101L4	5	40x56, 4 Pin PWM
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
CacheVault(s)	BTR-CV3108-1U1	1	CacheVault for Broadcom 3108 w ith SuperCap mounting in 1U 40x56 fan tray
	BTR-TFM8G-LSICV/M02 & BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3108; SuperCap mounting bracket for PCI-E location
	BTR-TFM8G-LSICV/M02 & MCP-240-00127-0N	-	CacheVault for Broadcom 3108; SuperCap mounting bracket for 2.5" HDD location
SuperCap for AOC-S2208L-H8IR	BTR-0024LH-LSI00297 & BKT-BBU-BRACKET-05	-	SuperCap TFM to be used w / Supermicro AOC-S2208L-H8IR; SuperCap mounting bracket for PCI-E location
	BTR-0024LH-LSI00297 & MCP-240-00127-0N	-	SuperCap TFM to be used w / Supermicro AOC-S2208L-H8IR; SuperCap mounting bracket for 2.5" HDD location

Storage Controller Card(s) & Cables(s)	AOM-S3108M-H8 & 2x CBL-SAST-0616	-	Supermicro Low Profile 12Gb/s Eight-Port SAS Internal Mezzanine RAID Adapter; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3108L-H8iR-16DD & 2x CBL-SAST-0556		Standard LP, 8 internal ports (12Gb/s) Gen-3, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8i & 2x CBL-SAST-0556		Standard LP, 8 internal ports (12Gb/s) Gen-3, 63HDD; RAID 0, 1, 10
	AOC-S3008L-L8e & 2x CBL-SAST-0556		Standard LP, 8 internal ports (12Gb/s) Gen-3, 122HDD; HBA
	AOC-S2308L-L8e & 2x CBL-SAST-0388L-02		Standard LP, 8 internal ports (6Gb/s) Gen-3, 122HDD; HBA
	AOC-S2308L-L8i & 2x CBL-SAST-0388L-02		Standard LP, 8 internal ports (6Gb/s) Gen-3, 63HDD; RAID 0, 1, 10
	AOC-S2208L-H8iR & 2x CBL-SAST-0388L-02		Standard LP, 8 internal ports (6Gb/s) Gen-3, 240HDD; RAID 0, 1, 5, 6, 10, 50, 60
	Network Card(s)	AOC-SGP-i2	-
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
Front Bezel	MCP-210-11601-0B	1	Black Front Bezel for SC113, SC113M, SC116, SC119, SC119U, SC514 (No LED indicator support)
Global Services & Support	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
Software	<u>SFT-OOB-LIC</u> • eStore	1	OOB Management Package (per node license)
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)