

SuperServer 2028GR-TRHT



Integrated Board



X10DRG-HT

**Views: | [Angled View](#) | [Top View](#) |
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Key Features

Up to 6 NVIDIA GPU

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 ; 16 DIMM slots
3. 6 PCI-E 3.0 x16 slots (GPU/MIC, opt.), 1 PCI-E 3.0 x8 (in x16) low-profile slot
4. Intel X540 Dual port 10GBase-T
5. 10 Hot-swap 2.5" SATA Drive Bays
6. 2000W Redundant Power Supplies **Platinum Level (94%+)**
7. 5 heavy duty cooling fans
8. Smart server management tools

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

Specifications

Product SKUs

- SYS-2028GR-TRHT** ■ SuperServer 2028GR-TRHT (Black)

Motherboard

Super X10DRG-HT

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.

- GPU/Xeon Phi Support** ■ NVIDIA® Tesla® K1/K2/K10/K40/K80/M40/M60/Xeon Phi

System Memory

- Memory Capacity** ■ 16x 288-pin DDR4 DIMM slots
■ Up to 2TB[†] ECC 3DS LRDIMM, 1TB ECC 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** ■ Intel C612 Controller
■ SATA3 (6Gbps) with 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

- Graphics** ■ ASPEED AST2400 BMC

Input / Output

- SATA** ■ 10 SATA3 (6Gbps) ports

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

Chassis

- Form Factor** ■ 2U Rackmount

- Model** ■ **CSE-218GH-R2K03B**

Dimensions and Weight

- Height** ■ 3.5" (89mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 31" (787mm)

- Package** ■ 26.5" (H) x 11" (W) x 44.5" (D)

- Weight** ■ Net Weight: 39.5 lbs (17.9 kg)
■ Gross Weight: 54 lbs (24.5 kg)

- Available Color** ■ Black

Front Panel

- Buttons** ■ Power On/Off button
■ System Reset button

- LEDs** ■ Power LED
■ Hard drive activity LED
■ 2 Network activity LEDs
■ System Overheat LED / Fan fail LED / UID LED

Expansion Slots

- PCI-Express** ■ 6 PCI-E 3.0 x16 slots (support GPU/Xeon Phi cards, option)
■ 1 PCI-E 3.0 x8 (in x16) low-profile slot

Drive Bays

- Hot-swap** ■ 10 Hot-swap 2.5" drive bays

System Cooling

- Fans** ■ 5 heavy duty 8cm fans with optimal fan speed control

Power Supply

2000W 1U Redundant Power Supplies with PMBus

- Total Output Power** ■ 1000W/1800W/1980W/2000W

- Dimension (W x H x L)** ■ 73.5 x 40 x 265 mm

- Input** ■ 100-120Vac / 12.5-10.5A / 50-60Hz
■ 200-220Vac / 10-9.5A / 50-60Hz
■ 220-230Vac / 10-9.8A / 50-60Hz
■ 230-240Vac / 10-9.8A / 50-60Hz
■ 200-240Vac / 10-9.8A (UL/cUL only)
■ 200-240Vdc / 10-9.1A (CCC only)

- +12V** ■ Max: 83.3A / Min: 0.1A (100-120Vac)
■ Max: 150A / Min: 0.1A (200-220Vac)
■ Max: 165A / Min: 0.1A (220-230Vac)
■ Max: 166.7A / Min: 0.1A (230-240Vac)
■ Max: 166.7A / Min: 0.1A (200-240Vac) (UL/cUL only)

USB	<ul style="list-style-type: none"> 4 USB 3.0 ports (2 rear, 2 via header) 2 USB 2.0 ports (2 via headers)
Video	<ul style="list-style-type: none"> 1 VGA Connector
Serial Port	<ul style="list-style-type: none"> 1 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 DMI 2.3 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support Hardware BIOS Virus protection SMBIOS 2.3 UEFI RTC (Real Time Clock) Wakeup

12V SB	<ul style="list-style-type: none"> Max: 3.5A / Min: 0A
Output Type	<ul style="list-style-type: none"> 25 Pairs Gold Finger Connector
Certification	 Platinum Level [Test Report]

PC Health Monitoring

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, +1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages. 5 Phase-switching voltage regulator
FAN	<ul style="list-style-type: none"> Total of five 4-pin PWM fans 5 fans with tachometer monitoring Status monitor for speed control Status monitor for on/off control Low noise fan speed control
Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 10x Fan Connectors PSU I²C temperature sensing logic Thermal Monitor 2 (TM2) support PECI
LED	<ul style="list-style-type: none"> Power Fail / Overheat LED Suspend-state Indicator LED UID LED
Other Features	<ul style="list-style-type: none"> SDDC Support

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)

Список деталей

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRG-HT	1	Super X10DRG-HT Motherboard
	CSE-218GH-R2K03B	1	2U Black SC218G Chassis
Backplane	BPN-SAS-218A	1	10-port 2U (GPU chassis) SAS 6Gbps direct-attached backplane, support up to 10x 2.5-inch SAS/SATA HDD/SSD
Cable 1	CBL-0294L-02	2	(EOL)30AWG 58CM IPASS TO 4 SATA W/SB CROSS OVER
Cable 2	CBL-0484L	2	SATA,INT,ROUND,ST-ST,55CM,30AWG
Cable 3	CBL-0157L	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,RIBBON IN RND TUBE,40CM,28AWG
Cable 4	CBL-PWEX-0582	6	8 pin to two 6+2 pin 12V GPU power cable, 30 cm 16/20 AWG, 10A/pin(16AWG), 6A/pin(20AWG), -25~85C, RoHS/REACH
Cable 5	CBL-0460L	1	8 Pin to Two 4 Pin Backplane Power Ext. 28/22cm. 18AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1626-QRG	1	SYS-2028GR-TR(T)/TRH(T), QRG,HF,RoHS/REACH
Riser Card	RSC-G2F-A66	1	RSC-G2F-A66-O-P
Riser Card	RSC-G2B-A66	1	RSC-G2B-A66
Riser Card	RSC-R2UG-E16R-X9	1	RSC-R2UG-E16R-X9
Riser Card	RSC-G2FR-A66	1	RSC-G2FR-A66-O-P
Heatsink / Retention	SNK-P0048PS	1	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
Heatsink / Retention	SNK-P0047PS	1	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-2K03P-1R	2	1U 2000W Redundant Power Supply Platinum 73.5mm width.,RoHS/REACH

Optional Parts List

	Part Number	Qty	Description
GPU Supporting Bracket	MCP-240-00139-0N	-	NVIDIA-GPU + PCI Bracket for supporting APEX2800LP and AOC-S2308L-L8E on SC218GH
GPU Supporting Bracket	MCP-120-00070-0N	-	SC218G-4GPU INTEL-XEON-PHI GPU Supporting Bracket Set (SC218-INTEL-KNIGHTR-GPU-BKT)
Cable	CBL-PWEX-0665	-	PCIe 8 pin female(black) to CPU 8 pin female(white), K80/M60/M40 GPU power for 300W card, 30cm, 18AWG
Battery Backup Kit	BTR-TFM8G-LSICVM02	1	Broadcom Supercap w/ 8GB CV + 24" cable (whole kit)
	MCP-240-00127-0N	1	Broadcom SuperCap Bracket, Include Screw, Same Size as 2.5" HDD
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> • <i>eStore</i>	1	OOB Management Package (per node license)
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)