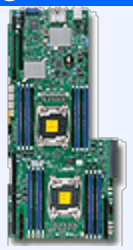
SuperServer 2028GR-TRT

Available Colors: Black

Integrated Board



X10DRG-HT

Key Features

- **Up to 4 GPU**

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, up to DDR4 2133MHz; 16x DIMM slots
3. 4x PCI-E 3.0 x16 slots (GPU/MIC, opt.), 1x PCI-E 3.0 x8 (in x16) low-profile slot
4. Intel X540 Dual port 10GBase-T
5. 10x Hot-swap 2.5" SATA Drive Bays
6. 2000W Redundant Power Supplies **Platinum Level (94%+)**
7. 5x heavy duty cooling fans
8. Smart server management tools

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

Specifications

Product SKUs

SYS-2028GR-TRT	▪ SuperServer 2028GR-TRT (**Black**)

Motherboard

Super X10DRG-HT

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 your Supermicro sales representative for additional details.
GPU/Xeon Phi Support	▪ K1/K10/K80/Xeon Phi

System Memory

Memory Capacity	▪ 16x 288-pin DDR4 DIMM slots ▪ Up to 1TB ECC LRDIMM, 512GB ECC RDIMM
Memory	▪ 2133/1866/1600MHz ECC DDR4 SDRAM

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 ▪ 2x Network activity LEDs ▪ System Overheat LED / Fan fail LED / UID LED

Expansion Slots

PCI-Express	▪ 4x PCI-E 3.0 x16 slots (support GPU/Xeon Phi cards, option)

Type	72-bit
DIMM Sizes	▪ RDIMM: 32GB, 16GB, 8GB, 4GB ▪ LRDIMM: 64GB, 32GB
Memory Voltage	▪ 1.2 V
Error Detection	▪ Corrects single-bit errors

On-Board Devices

Chipset	▪ Intel® C612 Express 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	▪ 10x SATA3 (6Gbps) ports
LAN	▪ 2x RJ45 10GBase-T ports ▪ 1x RJ45 Dedicated IPMI LAN port
USB	▪ 4x USB 3.0 ports (2 rear, 2 via header) ▪ 2x USB 2.0 ports (2 via headers)
Video	▪ 1x VGA Connector
Serial Port	▪ 1x Serial header

System BIOS

BIOS Type	▪ 128Mb SPI Flash EEPROM with AMI® BIOS
BIOS Features	▪ 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

	▪ 1x PCI-E 3.0 x8 (in x16) low-profile slot

Drive Bays

Hot-swap	▪ 10x 2.5" Hot-swap drive bays

System Cooling

Fans	▪ 5x 8cm heavy duty fans with optimal fan speed control

Power Supply

2000W 1U Redundant Power Supply

AC Input	▪ 1000W @ 100-120V, 12.5A Max., 50-60Hz ▪ 2000W @ 200-240V, 10A Max., 50-60Hz
DC Output	▪ 1000W: +12V/83.3A; +12Vsb/3.5A ▪ 2000W: +12V/166.7A; +12Vsb/3.5A
Certification	**Platinum Level** (Cert. in progress)

PC Health Monitoring

CPU	▪ Monitors for CPU Cores,+1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages. ▪ 5 Phase-switching voltage regulator
FAN	▪ Total of five 4-pin PWM fans ▪ 5x fans with tachometer monitoring ▪ Status monitor for speed control ▪ Status monitor for on/off control ▪ Low noise fan speed control
Temperature	▪ Monitoring for CPU and chassis environment ▪ CPU thermal trip support ▪ Thermal Control for 10x Fan Connectors ▪ PSU I^2C temperature sensing logic ▪ Thermal Monitor 2 (TM2) support ▪ PECI
LED	▪ Power Fail / Overheat LED ▪ Suspend-state Indicator LED ▪ UID LED
Other Features	▪ SDDC Support

Operating Environment / Compliance

RoHS	▪ RoHS Compliant
Environmental Spec.	▪ 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-X10DRG-HT CSE-218GH-R2K03B	1 1	Super X10DRG-HT Motherboard 2U Black SC218G Chassis
Backplane	BPN-SAS-218A	1	SAS Backplane for 2U GPU, x10 2.5
Cable 1	CBL-0157L	1	8 pin to 8 pin ribbon SGPIO cable with tube , 40cm, PBF
Cable 2	CBL-PWEX-0582	4	8 pin to two 6+2 pin 12V GPU power cable, 30 cm 16/20 AWG,HF,RoHS/REACH,PBF
Cable 3	CBL-0294L-02	2	Cross-over Ipass to 4 SATA w/SB. S. 58cm. 30AWG
Cable 4	CBL-0484L	2	55cm 30AWG SATA S-S cable
Cable 5	CBL-0460L	1	8 Pin to Two 4 Pin Backplane Power Ext. 28/22cm. 18AWG
Riser Card	RSC-G2F-A66	1	RSC-G2F-A66
Riser Card	RSC-G2FR-A66	1	RSC-G2FR-A66
Riser Card	RSC-R2UG-E16R-X9	1	RSC-R2UG-E16R-X9-O-P
Heatsink / Retention	SNK-P0047PS	1	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Heatsink / Retention	SNK-P0048PS	1	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
Fan 1	FAN-0136L4	5	80x80x38 mm 13.8K RPM SC217, SC827 Chassis Middle Fan
Drive Tray(s)	MCP-220-00047-0B	10	Black gen 3rd hot-swap 2.5inch HDD tray
Mounting Rails	MCP-290-00057-0N	1	Rail set, quick/quick, default for 4U 17.2
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-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), GPU power for 300W card, 30cm, 18AWG
Onsite Service Program	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
Onsite Service Program	OSNBD3/2/1	-	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)

Note: Different GPU/Xeon Phi cards require special brackets, for more information please refer to the user's manual