

SuperServer 1028GR-TRT



Integrated Board



X10DRG-HT

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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 ; 16 DIMM slots
3. 4 PCI-E 3.0 x16 slots (3 GPU/MIC cards optional), 1 PCI-E 3.0 x8 LP slot
4. Intel X540 Dual port 10GBase-T
5. 4 Hot-swap 2.5" SATA3 Drive Bays
6. 1600W Redundant Power Supplies **Platinum Level (94%+)**
7. 10 Counter rotating fans w/ optimal fan speed control
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-1028GR-TRT** ■ SuperServer 1028GR-TRT (**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** ■ 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

Chassis

- Form Factor** ■ 1U Rackmount

- Model** ■ **CSE-118GH-R1K66B**

Dimensions and Weight

- Height** ■ 1.7" (43mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 30.6" (777mm)

- Package** ■ 24" (H) x 8" (W) x 40" (D)

- Weight** ■ Net Weight: 35 lbs (15.9 kg)
■ Gross Weight: 48 lbs (21.8 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 (3x GPU/Xeon Phi cards optional)
■ 1x PCI-E 3.0 x8 (in x16) low-profile slot

Drive Bays

- Hot-swap** ■ 4x 2.5" Hot-swap drive bays

System Cooling

- Fans** ■ 10x counter-rotating fans with optimal fan speed control

Power Supply

1600W 1U Redundant Power Supplies with PMBus

- Total Output Power** ■ 1000W: 100 – 127Vac
■ 1600W: 200 – 240Vac

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

- Input** ■ 100-127Vac / 12.9A Max / 50-60Hz
■ 200-240Vac / 9.5A Max / 50-60Hz

- +12V** ■ Max: 82A / Min: 0.1A (100-127Vac)
■ Max: 132A / Min: 0.1A (200-240Vac)

- 12V SB** ■ Max: 2A / Min: 0.2A

- Output Type** ■ 25 Pairs Gold Finger Connector

- Certification**



Platinum Level
[[Test Report](#)]

PC Health Monitoring

USB	<ul style="list-style-type: none"> 4x USB 3.0 ports (2 rear, 2 via header) 2x USB 2.0 ports (2 via headers)
Video	<ul style="list-style-type: none"> 1x VGA Connector
Serial Port	<ul style="list-style-type: none"> 1x 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 2.3 ACPI 1.0 / 2.0 / 3.0 USB Keyboard support SMBIOS 2.7.1 UEFI

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores,+1.5V, +3.3V, +5V, +12V, +5 Stdb, +3.3 Stdb, VBAT, Memory Voltages. 5 Phase-switching voltage regulator
FAN	<ul style="list-style-type: none"> Total of ten 4-pin PWM fans 10x 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)

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRG-HT	1	Super X10DRG-HT Motherboard
	CSE-118GH-R1K66B	1	CSE-118GH-R1K66B Chassis
Air Shroud	MCP-310-11803-0N	1	Air Shroud for Air X9DRG/X10DRG boards in CSE-118GH-R1K66B
Backplane	BPN-SAS-118G-4	1	4-port 1U direct-attached backplane, support up to 4x 2.5-inch SAS/SATA HDD/SSD
Cable 1	CBL-0157L-02	1	CBL,SGPIO,2X4F TO 2X4F,P2.54,RIBBON IN RND TUBE,27CM,28AWG
Cable 2	CBL-PWEX-0582	3	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 3	CBL-0296L	5	4 pin to 4 pin fan extension cord, for PWM fan. 23cm. 24AWG
Cable 4	CBL-0460L	1	8 Pin to Two 4 Pin Backplane Power Ext. 28/22cm. 18AWG
Cable 5	CBL-0484L	4	SATA,INT,ROUND,ST-ST,55CM,30AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1625-QRG	1	SYS-1028GR-TR(T) QRG,HF,RoHS/REACH
Riser Card	RSC-R1UG-E16AR+II	1	RSC-R1UG-E16AR+II
Riser Card	RSC-G-A66-X	1	1U LHS Active GPU Riser Card with 2 PCI-Ex16 for X10 MBs
Riser Card	RSC-R1UG-E16R+II	1	RSC-R1UG-E16R+II
Riser Card	RSC-R1UG-E16-X9	1	RSC-R1UG-E16-X9
Heatsink / Retention	SNK-P0047PS	1	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Heatsink / Retention	SNK-P0047PSC	1	1U Passive Front CPU Heat Sink w/ a Side Air Channel for X9, X10 Systems Equipped with a Narrow ILM MB
Power Supply	PWS-1K66P-1R	2	1U 1600W Redundant Platinum Power Supply 73.5mm width,RoHS/REACH,PBF

Optional Parts List

	Part Number	Qty	Description
Cable	CBL-PWEX-0665	-	PCIe 8 pin female(black) to CPU 8 pin female(white), M60/M40 GPU power cable, 30cm, 18AWG
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)