

# 1027GR-TRF



Available Color: Black



## Integrated Board



X9DRG-HF



## Key Features

1. Dual socket R (LGA 2011) supports Intel® Xeon® processor E5-2600 and E5-2600 v2 family†
2. Up to 512GB ECC DDR3, up to 1866MHz; 8x DIMM slots
3. 3x PCI-E 3.0 x16 slots (support GPU/Xeon Phi cards), 1x PCI-E 3.0 x8 (in x16) low-profile slot
4. Integrated IPMI 2.0 with KVM and Dedicated LAN
5. Intel® i350 Dual-Port GbE Controller
6. 4x Hot-swap 2.5" SATA Drive Bays
7. 1800W Redundant Power Supplies Platinum Level (94%+)
8. 10x Counter rotating fans w/ optimal fan speed control
9. 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-1027GR-TRF ■ SuperServer 1027GR-TRF (Black)

### Motherboard

Super X9DRG-HF

### Processor/Cache

CPU ■ Dual Socket R (LGA 2011)  
 ■ Intel® Xeon® processor E5-2600 and E5-2600 v2 family† (up to 130W TDP)

Note † BIOS version 3.0 or above is required

Cache ■ Up to 30MB

System Bus ■ QPI up to 8 GT/s

GPU/Xeon Phi Support ■ M2090, up to 130W CPU at 30°C  
 ■ M2075, up to 130W CPU at 35°C  
 ■ K10/K20/K20X/K1/K2 (Kepler), up to 130W CPU at 30°C

### Chassis

Form Factor ■ 1U Rackmount

Model ■ CSE-118GQ-R1800B

### Dimensions

Height ■ 1.7" (43mm)

Width ■ 17.2" (437mm)

Depth ■ 31" (787mm)

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

## System Memory

Memory Capacity	<ul style="list-style-type: none"> <li>8x 240-pin DDR3 DIMM slots</li> <li>Up to 512GB DDR3 ECC LRDIMM</li> <li>Up to 256GB DDR3 ECC Registered memory (RDIMM)</li> <li>Up to 48GB DDR3 ECC and non-ECC UDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>1866/1600/1333/1066MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>32GB, 16GB, 8GB, 4GB, 2GB, 1GB</li> </ul>
Memory Voltage	<ul style="list-style-type: none"> <li>1.5 V, 1.35 V</li> </ul>
Error Detection	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> <li>Detects double-bit errors (using ECC memory)</li> </ul>

## On-Board Devices

Chipset	<ul style="list-style-type: none"> <li>Intel® C602 Chipset</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA 2.0 3Gbps with RAID 0, 1, 5, 10</li> <li>SATA 3.0 6Gbps with RAID 0, 1</li> </ul>
IPMI	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> <li>Nuvoton WPCM450 BMC</li> </ul>
Network Controllers	<ul style="list-style-type: none"> <li>Intel® i350 Dual Port Gigabit Ethernet</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>Matrox G200eW</li> </ul>

## Input / Output

SATA	<ul style="list-style-type: none"> <li>2 SATA 3.0 ports (6Gbps)</li> <li>2 SATA 2.0 ports (3Gbps)</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2 RJ45 Gigabit Ethernet LAN ports</li> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>2 USB 2.0 ports</li> </ul>
Video	<ul style="list-style-type: none"> <li>1 VGA Connector</li> </ul>
Keyboard/Mouse	<ul style="list-style-type: none"> <li>1 PS/2 Keyboard/Mouse port</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>1 Serial header</li> </ul>

## System BIOS

BIOS Type	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI® BIOS</li> </ul>
BIOS Features	<ul style="list-style-type: none"> <li>Plug and Play (PnP)</li> <li>APM 1.2</li> <li>DMI 2.3</li> <li>PCI 2.2</li> <li>ACPI 1.0 / 2.0</li> <li>USB Keyboard support</li> <li>Hardware BIOS Virus protection</li> <li>SMBIOS 2.3</li> <li>UEFI</li> <li>RTC (Real Time Clock) Wakeup</li> </ul>

## Expansion Slots

PCI-Express	<ul style="list-style-type: none"> <li>3x PCI-E 3.0 x16 slots (support GPU/Xeon Phi cards)</li> <li>1x PCI-E 3.0 x8 (in x16) low-profile slot</li> <li><a href="#">AOC Compatibility Matrix</a></li> </ul>
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## Drive Bays



Hot-swap	<ul style="list-style-type: none"> <li>4x 2.5" Hot-swap drive bays</li> </ul>
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## System Cooling

Fans	<ul style="list-style-type: none"> <li>10x counter-rotating fans with optimal fan speed control</li> </ul>
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## Power Supply

1800W (1+1) Redundant 1800W power supply with PMBus	
AC Input	<ul style="list-style-type: none"> <li>1000W Output @ 100-120V, 12-10A, 50-60Hz</li> <li>1200W Output @ 120-140V, 12-10A, 50-60Hz</li> <li>1800W Output @ 200-240V, 10-8.5A, 50-60Hz</li> </ul>
DC Output	<ul style="list-style-type: none"> <li>1000W: +12V/84A; +5Vsb/4A</li> <li>1200W: +12V/100A; +5Vsb/4A</li> <li>1800W: +12V/150A; +5Vsb/4A</li> </ul>

Certification	  Platinum Certified
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## PC Health Monitoring

CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages.</li> <li>CPU Core 6-Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Total of ten 4-pin PWM fans</li> <li>10x fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Status monitor for on/off control</li> <li>Low noise fan speed control</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Control for 10x Fan Connectors</li> <li>PSU I<sup>2</sup>C temperature sensing logic</li> <li>Thermal Monitor 2 (TM2) support</li> <li>PECI</li> </ul>
LED	<ul style="list-style-type: none"> <li>Power Fail / Overheat LED</li> <li>Suspend-state Indicator LED</li> <li>UID LED</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>SDDC Support</li> </ul>

## Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<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 - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X9DRG-HF	1	Super X9DRG-HF Motherboard
	CSE-118GQ-R1800B	1	1U Black SC118GQ Chassis
Air Shroud	MCP-310-11802-0N	1	Air Shroud for X9DRG used in SC118GQ-R1800B
Backplane	BPN-SAS-118G-4	1	SAS-118G-4; supports 4X2.5" SATA HDD,
Cable 1	CBL-0333L	3	6+2 pin to 8 pin GPU power extension from MB, 30cm. 18/20AWG
Cable 2	CBL-0460L	1	8 Pin to Two 4 Pin Backplane Power Ext. 28/22cm. 18AWG
Cable 3	CBL-0228L	2	55CM SATA ROUND S-RA PBF 26AWG
Cable 4	CBL-0157L-02	1	8 pin to 8 pin ribbon SGPIO cable, 27cm, PBF
Cable 5	CBL-0207L	1	59CM SATA ROUND S-S PBF.26AWG
Cable 6	CBL-0227L	1	48CM SATA ROUND S-RA PBF.26AWG
Cable 7	CBL-0296L	5	4 pin to 4 pin fan extension cord, for PWM fan. 23cm. 24AWG
Riser Card	RSC-R1UG-E16B-X9	1	RSC-R1UG-E16B-X9-O-P
Riser Card	RSC-R1UG-E16A-X9	1	RSC-R1UG-E16A-X9-O-P
Riser Card	RSC-R1UG-E16AR-X9	1	A Right Hand Side Riser Card with PCI-E x16
Riser Card	RSC-R1UG-E16R-X9	1	A 1U Right Hand Side Riser Card with PCI-E x16
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