

# GPU SuperWorkstation 7048GR-TR



## Integrated Board



Super X10DRG-Q



## Key Features

### • Supports 4-way Geforce SLI

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 DDR4 2133MHz; 16x DIMM slots
3. 4x PCI-E 3.0 x16 slots  
2x PCI-E 3.0 x8 (1 in x16) slots support Thunderbolt 2.0 AOC,  
1x PCI-E 2.0 x4 (in x8) slot;  
Up to 4x GPU
4. I/O ports: 1 VGA, 2 COM, 2 GbE, 10 USB 2.0, & 1 IPMI Dedicated LAN
5. 8x 3.5" Hot-swap, 3x Fixed 5.25" and 1x Fixed 3.5" Drive Bays
6. 4x Heavy Duty Fans, 2x Exhaust Fans, and 2x Active Heatsink with Optimal Fan Speed Control
7. 2000W High efficiency (96%) Redundant PSU; **Titanium Level**
8. Tower or Rackmount
9. GPU Kit for passive GPU/Xeon Phi support (MCP-320-74701-0N-KIT)

## Available Color:

Black



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

## Specifications

### Product SKUs

**SYS-7048GR-TR** ■ SuperServer 7048GR-TR (**Black**)

### Motherboard

**Super X10DRG-Q**

### Processor/Cache

**CPU** ■ Intel® Xeon® processor E5-2600 v3 family (up to 160W TDP) \*  
■ Dual Socket R3 (LGA 2011)

### Chassis

**Form Factor** ■ 4U Rackmountable / Tower  
■ Optional Rackmount Kit

**Model** ■ **CSE-747BTQ-R2K04B**

### Dimensions and Weight

**Height** ■ 18.2" (462mm)

**Width** ■ 7.0" (178mm)

**Depth** ■ 26.5" (673mm)

**Package** ■ 27" (H) x 13" (W) x 38" (D)

**Weight** ■ Net Weight: 46 lbs (20.9 kg)  
■ Gross Weight: 62 lbs (21.8 kg)

<b>Cores /Cache</b>	▪ Up to 18 Cores / Up to 45MB Cache
<b>System Bus</b>	▪ QPI up to 9.6 GT/s
<b>Note</b>	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.
<b>GPU Support</b>	▪ K1/K40M/K80

<b>System Memory</b>	
<b>Memory Capacity</b>	▪ 16x 288-pin DDR4 DIMM slots ▪ Up to 1TB ECC LRDIMM, 512GB ECC RDIMM
<b>Memory Type</b>	▪ 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
<b>DIMM Sizes</b>	▪ RDIMM: 32GB, 16GB, 8GB, 4GB ▪ LRDIMM: 64GB, 32GB
<b>Memory Voltage</b>	▪ 1.2 V
<b>Error Detection</b>	▪ Corrects single-bit errors

<b>On-Board Devices</b>	
<b>Chipset</b>	▪ Intel® C612 Express chipset
<b>SATA</b>	▪ SATA3 (6Gbps); RAID 0, 1, 5, 10
<b>IPMI</b>	▪ 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
<b>Network Controllers</b>	▪ Intel® i350 Dual Port Gigabit Ethernet ▪ Virtual Machine Device Queues reduce I/O overhead ▪ Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output ▪ 1x Realtek RTL8211E PHY (dedicated IPMI)
<b>Video</b>	▪ ASPEED AST2400 BMC

<b>Input / Output</b>	
<b>SATA</b>	▪ 10x SATA3 (6Gbps) ports
<b>LAN</b>	▪ 2x RJ45 Gigabit Ethernet LAN ports ▪ 1x RJ45 Dedicated IPMI LAN port
<b>USB</b>	▪ 5x USB 3.0 ports (2 rear, 2 via header, 1 Type A) ▪ 4x USB 2.0 ports (2 rear, 2 via headers)
<b>Audio</b>	▪ 7.1 HD Audio
<b>Video</b>	▪ 1x VGA port
<b>Serial Port / Header</b>	▪ 2x COM ports (1 rear, 1 Header)
<b>Thunderbolt</b>	▪ Thunderbolt AOC Header

<b>Expansion Slots</b>	
<b>PCI-Express</b>	▪ 4x PCI-E 3.0 x16 (double-width) ▪ 2x PCI-E 3.0 x8 (1 in x16 slot) support Thunderbolt 2.0 AOC ▪ 1x PCI-E 2.0 x4 (in x8)

<b>System BIOS</b>	
<b>BIOS Type</b>	▪ 128Mb SPI Flash EEPROM with AMI® BIOS ▪ Plug and Play (PnP) ▪ APM 1.2 ▪ DMI 2.2

<b>Available Colors</b>	▪ Dark Gray
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<b>Front Panel</b>	
<b>Buttons</b>	▪ Power On/Off button ▪ System Reset button
<b>LEDs</b>	▪ Power status LED ▪ Hard drive activity LED ▪ 2x Network activity LEDs ▪ System Overheat & Power Fail LED
<b>Ports</b>	▪ 2x Front USB 2.0 Ports

<b>Drive Bays</b>	
<b>Hot-swap</b>	▪ 8x 3.5" Hot-swap SAS/SATA Drive Trays
<b>Peripheral Bay(s)</b>	▪ 3x 5.25" drive bays in storage module - rotates 90° for Rackmount ▪ 1x 3.5" fixed drive bay

<b>SAS / SATA Backplane</b>	
SAS / SATA Hard Drive Backplane with SES2	

<b>System Cooling</b>	
<b>Fans</b>	▪ 4x 92x38mm 4-pin PWM Middle Cooling Fans ▪ 2x 80x38mm 4-pin PWM Rear Exhaust Fans
<b>Heatsink</b>	▪ 2x Active Heatsink with Optimal Fan Speed Control

<b>Power Supply with Digital Switching Control</b>	
2000W Titanium Level (96%) High-efficiency Redundant Power Supplies	
<b>Total Output Power</b>	▪ 1000W/1800W/1980W/2000W
<b>AC Input</b>	▪ 100-127 V, 50-60 Hz ▪ 200-220 V, 50-60 Hz ▪ 220-230 V, 50-60 Hz ▪ 230-240 V, 50-60 Hz
<b>+12V</b>	▪ Max: 83.3A & Min: 0A (100Vac-127Vac) ▪ Max: 150A & Min: 0A (200Vac-220Vac) ▪ Max: 165A & Min: 0A (220Vac-230Vac) ▪ Max: 166.7A & Min: 0A (230Vac-240Vac)
<b>5V SB</b>	▪ Max: 1A / Min: 0A

<b>Certification</b>	  <b>Titanium Level [ Test Report ]</b>
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<b>PC Health Monitoring</b>	
<b>CPU</b>	▪ Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages. ▪ 6-Phase-switching voltage regulator
<b>FAN</b>	▪ Total of eight fan headers supporting up to 8 fans ▪ 8x fans with tachometer status monitoring ▪ Status monitor for speed control ▪ Pulse Width Modulated (PWM) fan connectors
<b>Temperature</b>	▪ Monitoring for CPU and chassis environment ▪ CPU thermal trip support ▪ Thermal Control for 8x fan connectors ▪ Thermal Monitor 2 (TM2) support

**BIOS****Features**

- ACPI 1.0 / 2.0
- USB Keyboard support
- SMBIOS 2.3
- UEFI

## ▪ PECI

**LED**

- CPU / System Overheat LED
- Suspend static indicator LED
- UID/Remote LED

**Other Features**

- Chassis intrusion detection
- Chassis intrusion header

**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)**

	<b>Part Number</b>	<b>Qty</b>	<b>Description</b>
<b>Motherboard / Chassis</b>	MBD-X10DRG-Q	1	Super X10DRG-Q Motherboard
	CSE-747BTQ-R2K04B	1	4U Chassis
<b>Backplane</b>	BPN-SAS-747TQ-O-P	1	4u, SAS Backplane,x8 3.5
<b>Cable 1</b>	CBL-0484L	8	55cm 30AWG SATA S-S cable
<b>Cable 2</b>	CBL-CDAT-0661	2	8 pin to 8 pin round SGPIO cable, 40cm, 28AWG, pinout 1-1,RoHS/REACH
<b>Heatsink / Retention</b>	SNK-P0050AP4	2	4U Active CPU Heat Sink for X9, X10 Workstations
<b>Power Supplies</b>	PWS-2K04A-1R	2	2000W redundant titanium level power supply

**Optional Parts List**

	<b>Part Number</b>	<b>Qty</b>	<b>Description</b>
<b>Mounting Rails</b>	MCP-290-00059-0B	-	Rail set+handles, quick/quick, optional for 4U 17.2"W tower
<b>AOC Dummy Assembly</b>	MCP-240-00096-0N	-	SC747B GPU / Add-on Card Dummy Assembly (2 Slots)-Single Pack
<b>HDD Converter</b>	MCP-220-93801-0B	-	Black Hotswap Gen 6 3.5 to 2.5 HDD Tray (SC747, 936, 938 and Blade)
<b>GPU Kit</b>	MCP-320-74701-0N-KIT	-	GPU Kit for passive GPU/Xeon Phi support
<b>Cable</b>	CBL-PWEX-0663	-	PCIe 8 pin male(black) to CPU 8 pin female(white) power adapter, 5cm, 18AWG
<b>Onsite Service Program</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
<b>Onsite Service Program</b>	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	SFT-OOB-LIC	1	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
<b>Add-on Card</b>	AOC-TBT-DSL5320	1	Thunderbolt 2,W/Display and GPIO cable,HF,RoHS/REACH