

SuperServer F647G2-F73+



Integrated Board



Super X9DRFF-7G+

Available Colors:

Black



Key Features

2 Hot-plug System Nodes in 4U Front I/O. 6x GPU/Xeon Phi per node. Each node supports:

1. Dual socket R (LGA 2011) supports Intel® Xeon® processor E5-2600 and **E5-2600 v2** family†
2. Up to 1TB ECC DDR3, up to 1866MHz; 16x DIMM sockets
3. 6x PCI-E 3.0 x16 for Double-width GPU/Xeon Phi; 2x PCI-E 3.0 x8 slots
4. Front I/O ports: Dual GbE LAN, 2x USB 2.0, and 1x VGA connector
5. **Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port**
6. 8x 2.5" Hot-swap SAS/SATA HDDs; SAS2 support via LSI 2308
7. 2000W Redundant Power Supplies **Platinum Level (94%+)**

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

Specifications

Product SKUs

- SYS-F647G2-F73+** ■ SuperServer S-F647G2-F73+ (**Black**)

Motherboard

Super X9DRFF-7G+

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** ■ 6x Double-width GPU/Xeon Phi per node (total of 12x GPU/Xeon Phi cards in 4U)
■ Supports Intel Xeon Phi
■ Supports NVIDIA K10/K20/K20X (Kepler), K1/K2, and M2090/M2075

System Memory (per node)

Chassis

Form Factor ■ 4U Rackmount

Model ■ **CSE-F442BG-R2K02BP**

Dimensions

Width ■ 17.63" (448mm)

Height ■ 6.96" (177mm)

Depth ■ 35" (889mm)

Weight ■ Net Weight: 105 lbs (47.63 kg)
■ Gross Weight: 150 lbs (68.04 kg)

Available Colors ■ Black

Front Panel



Buttons ■ Power On/Off button
■ UID button

LEDs ■ Power status LED
■ System Overheat / Power Fail LED
■ UID LED

Expansion Slots (per node)

PCI-Express ■ 6x PCI-E 3.0 x16 FH, FL slots (support 6x Double-width GPU/Xeon Phi)

Memory Capacity	<ul style="list-style-type: none"> 16x 240-pin DDR3 DIMM sockets Up to 1TB DDR3 ECC LRDIMM Up to 512GB DDR3 ECC Registered memory (RDIMM) Up to 128GB DDR3 ECC Un-Buffered memory (UDIMM)
Memory Type	<ul style="list-style-type: none"> 1866/1600/1333/1066/800MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs
DIMM Sizes	<ul style="list-style-type: none"> 64GB, 32GB, 16GB, 8GB, 4GB, 2GB, 1GB
Memory Voltage	<ul style="list-style-type: none"> 1.5 V, 1.35 V
Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors Detects double-bit errors (using ECC memory)
On-Board Devices	
Chipset	<ul style="list-style-type: none"> Intel® C602 Chipset
AHCI SATA	<ul style="list-style-type: none"> SATA2 (3Gbps) with RAID 0, 1, 5, 10 SATA3 (6Gbps) with RAID 0, 1
SAS	<ul style="list-style-type: none"> SAS2 (6Gbps) via LSI 2308 SW RAID 0, 1, 10 support
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support Nuvoton WPCM450 BMC
Network Controllers	<ul style="list-style-type: none"> 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 RTL8201F PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> Matrox G200eW
Input / Output (per node)	
SAS	<ul style="list-style-type: none"> 8x SAS2 (6Gbps) ports
LAN	<ul style="list-style-type: none"> 2x RJ45 Gigabit Ethernet ports 1x RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 2x USB 2.0 ports
VGA	<ul style="list-style-type: none"> 1x VGA port
Serial Port / Header	<ul style="list-style-type: none"> 1x Fast UART 16550 port

	<ul style="list-style-type: none"> 2x PCI-E 3.0 x8 FH, HL slots
Drive Bays (per node)	
Hot-swap	<ul style="list-style-type: none"> 8x 2.5" Hot-swap SAS/SATA HDD bays
System Cooling	
Fans	<ul style="list-style-type: none"> 8x 8cm heavy duty fans with air shroud and PWM fan speed control
Switching Power Supply	
2000W Redundant Power Supplies with I ² C & PMBus	
AC Input	<ul style="list-style-type: none"> 1100W Output @ 100-120V, 12.7-10.5A, 50-60Hz 1400W Output @ 120-140V, 13.5-11.5A, 50-60Hz 1800W Output @ 200-220V, 10.0-9.5A, 50-60Hz 1980W Output @ 220-230V, 10.0-9.8A, 50-60Hz 2000W Output @ 230-240V, 10.0-9.8A, 50-60Hz
5Vsb	4A
I²C Remote Monitoring	FRU Data / SMBus / PMBus
Certification	  Platinum Certified (Cert. in progress)
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 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3 UEFI
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-X9DRFF-7G+	4	Super X9DRFF-7G+ Motherboard
	CSE-F442BG-R2K02BP	1	4U Chassis
Backplane	BPN-ADP-F418L-O-P	4	BPN;SASADP;SAS827-H8;H8DTT;cable req
Backplane	BPN-ADP-4UGPU-O-P	4	Backplan adapter card for 4UGPU,RoHS/REACH,PBF
Backplane	BPN-SAS-I28A	2	BPN-SAS-I28A
Cable 1	CBL-PWEX-0460-05	2	8 pin male to two big 4 pin female power cable, 35cm and 22cm. 18AWG,HF,RoHS/REACH,PBF
Cable 2	CBL-SAST-0583	4	Cross-over lpass to 4 SATA w/SB. S. 24cm. 30AWG,HF,RoHS/REACH,PBF
Riser Card	RSC-R4UFF-A2E16A-O-P	2	RSC-R4UFF-A2E16A
Riser Card	RSC-R2UFF-X2E16B-O-P	2	RSC-R2UFF-X2E16B ,RoHS/REACH,PBF
Riser Card	RSC-R4UFF-A4E16B-O-P	2	RSC-R4UFF-A4E16B
Heatsink / Retention	SNK-P0048PS	4	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-2K02P-1R	4	2000W redundant platinum power supply

Optional Parts List

	Part Number	Qty	Description
Internal Fan	FAN-0150L4	8	Rear internal fan for cooling enhancement
Software	SFT-OOB-LIC	2	BIOS management capabilities
Software	SFT-DCMS-Single	-	Remote Management - Datacenter Package

Note: Power redundancy is based on configuration. For more information, please refer to user manual.