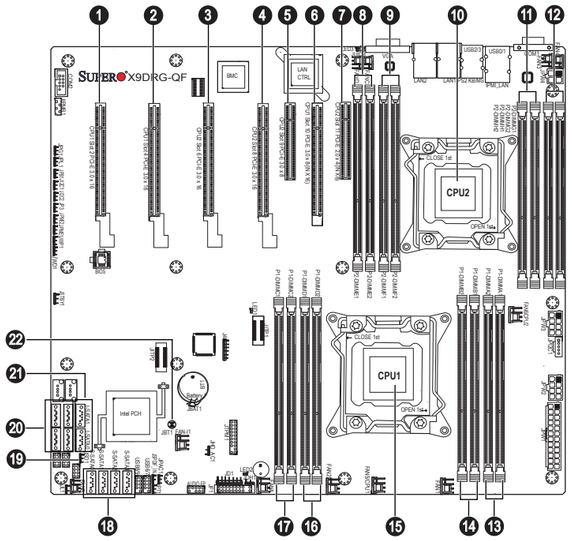
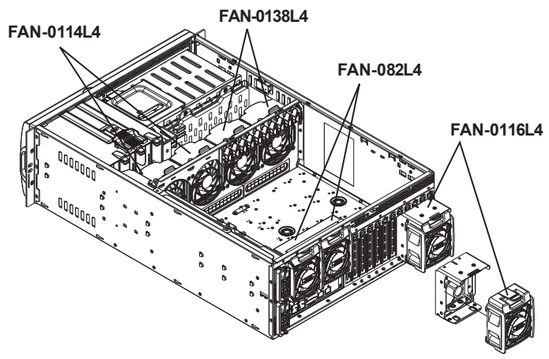
SUPERMICRO® SuperServer 7047GR-TPRF/FM409/FM475 Quick Reference Guide

Board Layout



No.	Description
1	CPU1 Slot2 PCI-E 3.0 x16
2	CPU1 Slot4 PCI-E 3.0 x16
3	CPU2 Slot6 PCI-E 3.0 x16
4	CPU2 Slot8 PCI-E 3.0 x16
5	CPU2 Slot9 PCI-E 3.0 x8
6	CPU1 Slot10 PCI-E 3.0 x8 (in x16)
7	CPU2 Slot11 PCI-E 2.0 x4 (in x8)
8	P2-DIMME1/P2-DIMME2
9	P2-DIMMF1/P2-DIMMF2
10	CPU2
11	P2-DIMMH1/P2-DIMMH2
12	P1-DIMMG1/P1-DIMMG2
13	P1-DIMMA1/P1-DIMMA2
14	P1-DIMMB1/P1-DIMMB2
15	CPU1 (Install CPU1 first)
16	P1-DIMMD1/P1-DIMMD2
17	P1-DIMMC1/P1-DIMMC2
18	S-SATA 2.0 Ports (S-SATA 0~3)
19	JSD1=SATA DOM (Device-On-Module) Power Header
20	SATA 2.0 Ports (I-SATA 2~5)
21	SATA 3.0 Ports (I-SATA 0~1)
22	JBT1 = CMOS Reset

Optimized Thermal Fan



MEMORY

Processors and their Corresponding Memory Modules								
CPU#	Corresponding DIMM Modules							
CPU 1	P1-DIMMA1	P1-DIMMB1	P1-DIMMC1	P1-DIMMD1	P1-DIMMA2	P1-DIMMB2	P1-DIMMC2	P1-DIMMD2
CPU2	P2-DIMME1	P2-DIMMF1	P2-DIMMG1	P2-DIMMH1	P2-DIMME2	P2-DIMM F2	P2-DIMMG2	P2-DIMMH2

Processor and Memory Module Population for Optimal Performance	
Number of CPUs+DIMMs	CPU and Memory Population Configuration Table (For memory to work properly, please install as shown below)
1 CPU & 2 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1
1 CPU & 4 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1
1 CPU & 5~8 DIMMs	CPU1 P1-DIMMA1/P1-DIMMB1, P1-DIMMC1/P1-DIMMD1 + Any memory pairs in P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2 slots
2 CPUs & 4 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1, P2-DIMME1/P2-DIMMF1
2 CPUs & 6 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1
2 CPUs & 8 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1
2 CPUs & 10~16 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1 + Any memory pairs in P1, P2 DIMM slots
2 CPUs & 16 DIMMs	CPU1/CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1,P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2, P2-DIMME2/P2-DIMMF2/P2-DIMMG2/P2-DIMMH2

Beep Codes

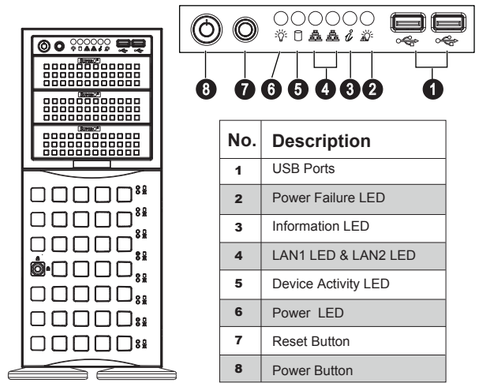
Beep Code/LED	Message	Description
1 beep	Refesh	Circuite have been reset. (Ready to power up)
5 short beeps + 1 long beep	Memory	No memory detected
5 long beeps	No Con-In or Con-Out devices	Con-In includes USB or PS/2 keyboard, PCI or serial console redirection, IPMI KVM or SOL. Con-Out includes video controller, PCI or serial console redirection, IPMI SOL.
1 continuous beep	System	System overheat

PCI-e dummy

The PCI-e dummy (MCP-240-00096-0N) is required if there are less than 4x GPU or 4x Xeon Phi cards installed in the system. Refer to the table below on where to install the PCIe dummy and the quantities needed based on the number of Xeon Phi coprocessors or GPU cards.

Number of double width GPUs or coprocessors/slot number on motherboard	Number of PCI-e dummy/slot location
4/slot 2, 4, 6, 8	0
3/slot 2, 4, 6	1/slot 8
2/slot 2, 4	2/slot 6, 8
1/slot 2	3/slot 2, 4, 6

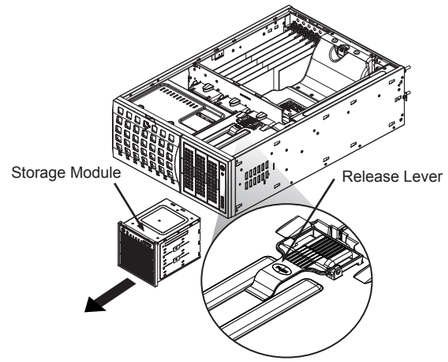
Front View & Interface



No.	Description
1	USB Ports
2	Power Failure LED
3	Information LED
4	LAN1 LED & LAN2 LED
5	Device Activity LED
6	Power LED
7	Reset Button
8	Power Button

Tower or Rack Configuration

The SC747 chassis is shipped in tower mode and can be immediately used as workstation. If the chassis is to be used in a rack, the storage module must be rotated 90 degrees and the storage module cover must be replaced.



Rotating the Storage Module for Rack Mounting

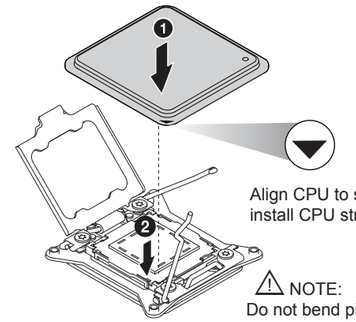
1. Open the chassis cover.
2. Locate the storage module and disconnect any cables from the storage module to any component in the chassis.
3. Push the storage module release lever. This lever unlocks the storage module
4. Grasp the external edges of the storage module and pull the unite from the chassis
5. Turn the storage module 90 degrees
6. Reinsert the module into the chassis and reconnect the cords

Installing Graphics (GPU) Cards

This system supports up to 4 double width GPU cards, Fermi, Kepler K10, K20 and coprocessor Xeon Phi

Important Note for Kepler K10 GPUs:
Note the airflow arrows on top of the Kepler K10 GPU card. This system supports kepler k10 card with the arrow pointing toward the Tesla logo.

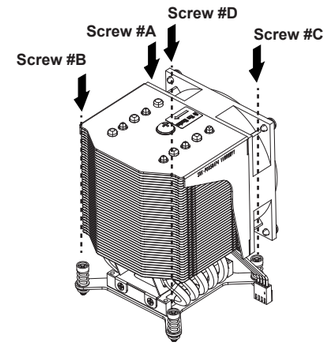
CPU Installation



Align CPU to socket; install CPU straight down

⚠ NOTE:
Do not bend pin inside socket

Heatsink Installation



1. Place heatsink on top of installed CPU
2. Line up the four screws to socket
3. Push down heatsink and screw down as shown (cross pattern, in order: A, C, B, D)
4. NOTE: Only use 6-8 lb/f of torque; otherwise, hand-tighten each screw, to avoid damaging the system

Caution

⚠ **SAFETY INFORMATION**
IMPORTANT: See installation instructions and safety warning before connecting system to power supply.
http://www.supermicro.com/about/policies/safety_information.cfm

⚠ **WARNING:**
To reduce risk of electric shock/damage to equipment, disconnect power from server by disconnecting all power cords from electrical outlets.
If any CPU socket empty, install protective plastic CPU cap

⚠ **CAUTION:**
Always be sure all power supplies for this system have the same power output. If mixed power supplies are installed, the system will not operate.

For more information go to :
http://www.supermicro.com/support