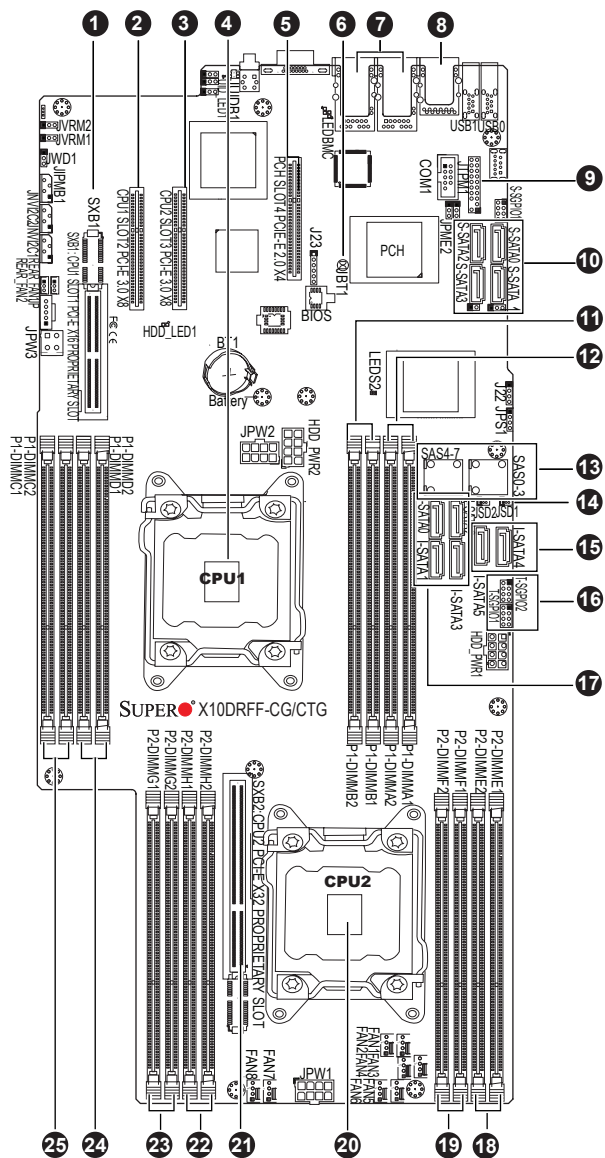


SUPERMICR® SuperServer F648G2-FC0+/FC0PT+ Quick Reference Guide

Board Layout



No.	Description
1	SXB1: CPU1 Slot1 PCI-E 3.0 x16 Proprietary Slot
2	CPU1 Slot2 PCI-E 3.0 x8
3	CPU2 Slot3 PCI-E 3.0 x8
4	CPU1 Socket
5	PCH Slot4 PCI-E 2.0 x4
6	JBT1: CMOS Clear
7	1G_bit LAN Ports 1/2 (X10DRFF-IG/CG) 10G_bit LAN Ports 1/2 (X10DRFF-ITG/CTG)
8	IPMI_LAN1: IPMI dedicated LAN Support
9	JTPM1: Trusted Platform Module Header
10	S-SATA 0~3: SATA 3.0 connectors
11	P1-DIMMB1 / P1-DIMMB2
12	P1-DIMMA1 / P1-DIMMA2

No.	Description
13	mini-SAS HD Connectors; SAS0-3: LSI SAS Port 0-3 SAS4-7: LSI SAS Port 4-7
14	JSD1 & JSD2: I-SATA4 & I-SATA5 Power Connector
15	I-SATA4~5: Support SMC1 SuperDOM
16	T-SGPIO 1/2: Intel SATA SGPIO
17	I-SATA0~3: Internal SATA 3.0 Ports
18	P2-DIMME1 / P2-DIMME2
19	P2-DIMMF1 / P2-DIMMF2
20	CPU2 Socket
21	SXB2: CPU2 PCI-E x32 Proprietary Slot
22	P2-DIMMH1 / P2-DIMMH2
23	P2-DIMMG1 / P2-DIMMG2
24	P1-DIMMD1 / P1-DIMMD2
25	P1-DIMMC1 / P1-DIMMC2

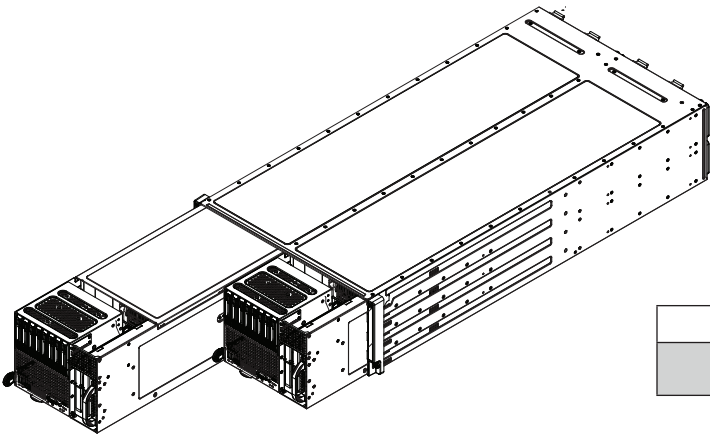
Memory

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-DIMMF2	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 follow the instructions 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 pair of 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 & 9~16 DIMMs	CPU1 + CPU2 P1-DIMMA1/P1-DIMMB1/P1-DIMMC1/P1-DIMMD1, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1 + any pair of 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

Populating RDIMM/LRDIMM DDR4 Memory Modules						
Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)	Speed (MT/s); Voltage (V); Slots per Channel (SPC) and DIMMs per Channel (DPC)			
			2 Slots per Channel			
			1 DPC		2 DPC	
			E5-2600 V3	E5-2600 V4	E5-2600 V3	E5-2600 V4
RDIMM	SRx4	4 GB	1.2 V	1.2 V	1.2 V	1.2 V
		8 GB	2133	2400	1866	2133
RDIMM	SRx8	4 GB	2133	2400	1866	2133
RDIMM	DRx8	8 GB	2133	2400	1866	2133
RDIMM	DRx4	16 GB	2133	2400	1866	2133
LRDIMM	QRx4	32 GB	2133	2400	2133	2400
LRDIMM 3DS	8Rx4	64 GB	2133	2400	2133	2400

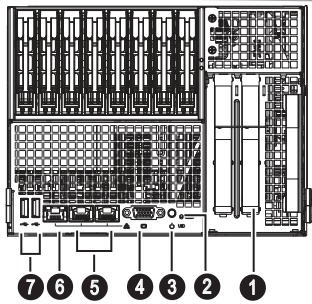
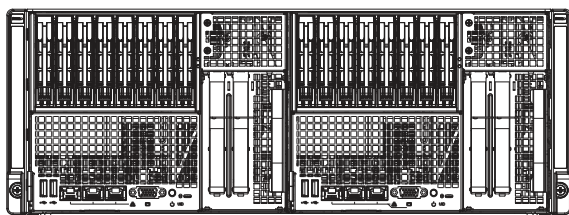
Nodes and Corresponding Hard Drives



F442BG Node Locations in the Chassis

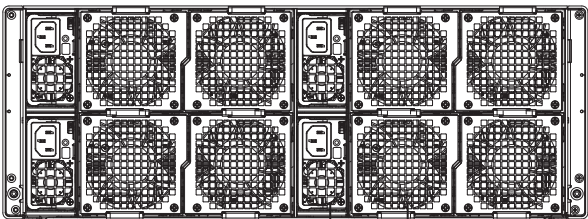
Node 1	Node 2
Controls eight 2.5" HDDs, A1-A8	Controls eight 2.5" HDDs, B1-B8

Front View & Interface



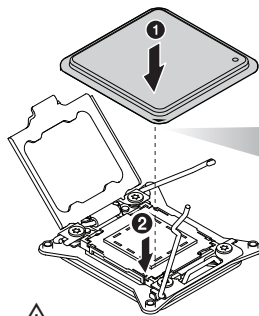
No.	Description
1	Full-height & half-length PCI-E Expansion Slot
2	UID Button
3	Power Button
4	VGA Port
5	GbE LAN1/LAN2 Ports
6	Dedicated LAN for IPMI
7	USB 0/1 Ports

Rear View



No.	Description
1	Power Supply Module
2	Rear Fan

CPU Installation



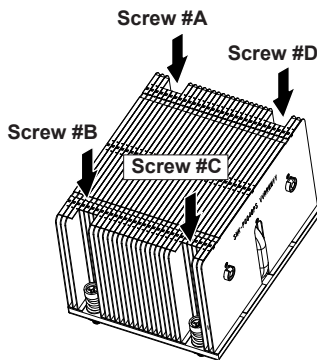
Align CPU to socket;
install CPU straight down



NOTE:

- Do not bend pin inside socket.
- Please contact Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

Heatsink Installation



- Place the heatsink on top of the installed CPU.
- Align the four screws to the socket.
- Holding the heatsink in place, screw down as shown (cross pattern, in order: A, C, B, D).
- Note: Only use 6-8 lb/f of torque; otherwise, hand-tighten each screw to avoid damaging the CPU.

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>

