SUPERMICRO® SuperWorkstation 7037A-i Quick Reference Guide

Board Layout

SUPER●X9DAi

CPU2

CPU1

Note:
Install CPU1 first
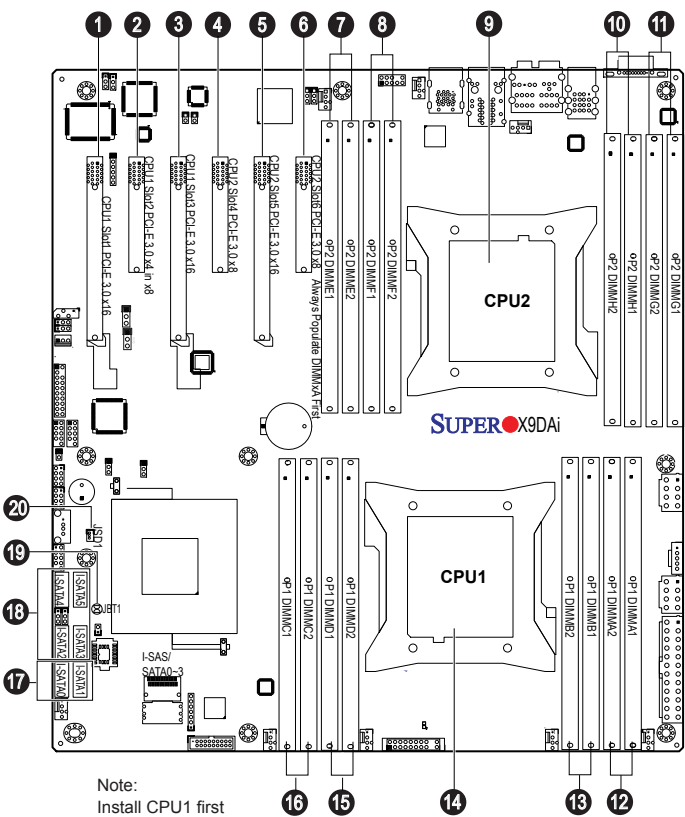
No.	Description	No.	Description
1	CPU1 Slot1 PCI-E 3.0 x16	11	P2 DIMMG1/P2 DIMMG2
2	CPU1 Slot2 PCI-E 3.0 x4 in x8	12	P1 DIMMA1/P1 DIMMA2
3	CPU1 Slot3 PCI-E 3.0 x16	13	P1 DIMMB1/P1 DIMMB2
4	CPU2 Slot4 PCI-E 3.0 x8	14	CPU1 (Install CPU1 first)
5	CPU2 Slot5 PCI-E 3.0 x16	15	P1 DIMMD1/P1 DIMMD2
6	CPU2 Slot6 PCI-E 3.0 x8	16	P1 DIMMC1/P1 DIMMC2
7	P2 DIMME1/P2 DIMME2	17	SATA 0/1 = SATA 3.0 Ports
8	P2 DIMMF1/P2 DIMMF2	18	SATA 2~5 = SATA 2.0 Ports
9	CPU2	19	JBT1 = CMOS Reset
10	P2 DIMMH1/P2 DIMMH2	20	JSD1= SATA DOM Power

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
CPU 2	P2-DIMME1	P2-DIMMF1	P2-DIMMG1	P2-DIMMH1	P2-DIMME2	P2-DIMMF2	P2-DIMMG2	P2-DIMMH2

Processors and Memory Module Population for Optimal Performance

Number of CPUs + DIMMs	CPU and Memory Population Configuration Table (For memory to work properly, 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 memory pairs in P1-DIMMA2/P1-DIMMB2/P1-DIMMC2/P1-DIMMD2 slot
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/P2-DIMMG1
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/P1-DIMMA2, P2-DIMME1/P2-DIMMF1/P2-DIMMG1/P2-DIMMH1/P2-DIMME2, Any memory pairs in P1, P2 DIMM slots

Installing UDIMM (ECC/non-ECC) Memory

Ranks per DIMM & Data Width	Memory Capacity Per DIMM (See the Note below)			Speed (MT/s) and Voltage Validated by Slot per Channel (SPC) and DIMM Per Channel (DPC)			
				2 Slots Per Channel			
				1DPC		2DPC	
				1.35V	1.5V	1.35V	1.5V
SRx8 Non-ECC	1GB	2GB	4GB	NA	1066, 1333	NA	1066, 1333
DRx8 Non-ECC	2GB	4GB	8GB	NA	1066, 1333	NA	1066, 1333
SRx16 Non-ECC	512MB	1GB	2GB	NA	1066, 1333	NA	1066, 1333
SRx8 ECC	1GB	2GB	4GB	1066, 1333	1066, 1333	1066	1066, 1333
DRx8 ECC	2GB	4GB	8GB	1066, 1333	1066, 1333	1066	1066, 1333

Notes:
1. 1 GB/2GB/4GB DRAMs are supported; however, only 2GB and 4 GB DRAMs are validated.
2. Command Address Timing is 1N for 1DPC an 2N for 2DPC.
3. ES-4600 4S platforms do not support 3DPC UDIMMs.
4. Please refer to the ES-460 Platform Design Guide for memory population rules.

Installing RDIMM (ECC) Memory

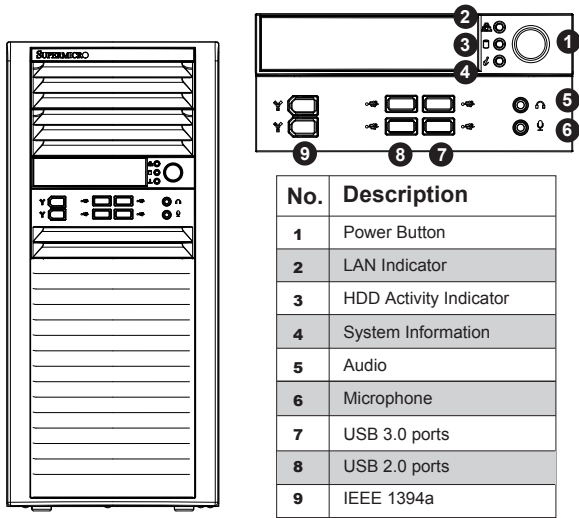| Ranks per DIMM & Data Width	Memory Capacity Per DIMM (See the Note below)			Speed (MT/s) and Voltage Validated by Slot per Channel (SPC) and DIMM Per Channel (DPC)(Note 2, 3, 4)			
				1 Slot Per Channel		2 Slots Per Channel	
				1DPC		2DPC	
				1.35V	1.5V	1.35V	1.5V
SRx8	1GB	2GB	4GB	1066, 1333	1066, 1333	1066	1066, 1333
DRx8	2GB	4GB	8GB	1066, 1333	1066, 1333	1066	1066, 1333
SRx4	2GB	4GB	8GB	1066, 1333	1066, 1333	1066	1066, 1333
DRx4	4GB	8GB	16GB	1066, 1333	1066, 1333	1066	1066, 1333
QRx4	8GB	16GB	32GB	800	1066	800	800
QRx8	4GB	8GB	16GB	800	1066	800	800

Notes:
1. 1 GB/2GB/4GB DRAMs are supported; however, only 2GB and 4 GB DRAMs are validated.
2. Command Address Timing is 1N for 1DPC an 2N for 2DPC.
3. Please refer to the ES-460 Platform Design Guide for memory population rules.
4. QR RDIMMs are supported but not validated. Memory testing are limited to system level testing. Singal integrity in interoperability testing are not performed. The passing QR RDIMMs will be posted on the website.
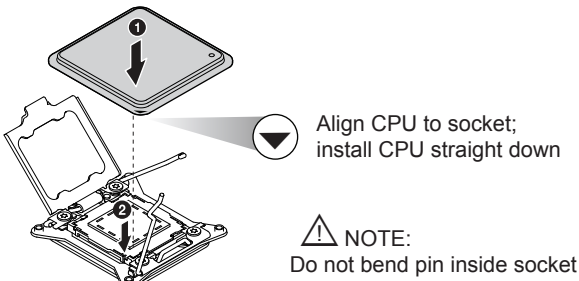
Installing LRDIMM Memory

Ranks per DIMM & Data Width	Memory Capacity Per DIMM (Note 2)		Speed (MT/s) and Voltage Validated by Slot Per Channel (SPC) and DIMM Per Channel (DPC) (Note 3, 4, 5, 6)	
			2 Slots Per Channel	
			1DPC/2DPC	
			1.35V	1.5V
QRx4 (DDP) (Note 7)	16GB	32GB	1066	1066, 1333
QRx8 (P) (Note 8)	8GB	16GB	1066	1066, 1333

Notes:
1. Physical Rank is used to calculate DIMM capacity.
2. Command Address Timing is 1N.
3. Only 2GB.4GB DRAMs are supported and validated.
4. The speeds listed are estimated only and will be verified through simulation.
5. Please refer to the ES-4600 Platform Design Guide for memory population rules.
6. For 3SPC/3DPC-Rank Multiplication (RM) is>= 2.
7. DDP is for Dual Die Package DRAM stacking.
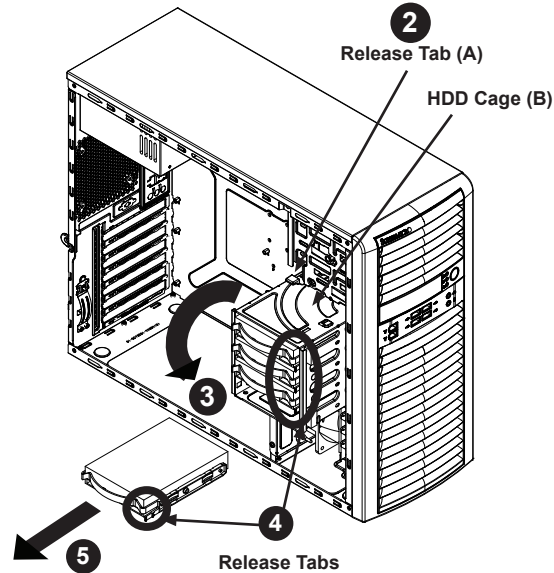8. "P" Means "Planner Monolithic DRAM Die".

Heatsink Installation

Screw #C   Screw #A

Screw #B   Screw #D

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, B, C, D)
4. NOTE: Only use 6-8 lb/f of torque; otherwise, hand-tighten each screw, to avoid damaging the system

Front View & Interface

No.	Description
1	Power Button
2	LAN Indicator
3	HDD Activity Indicator
4	System Information
5	Audio
6	Microphone
7	USB 3.0 ports
8	USB 2.0 ports
9	IEEE 1394a

CPU Installation

Align CPU to socket; install CPU straight down

⚠ NOTE:
Do not bend pin inside socket

Hard Drives Installation

Release Tab (A)

HDD Cage (B)

Release Tabs

Removing and Installing 3.5" Hard Drives

1. Disconnect the chassis from any power source.
2. Rotate the hard drive cage outward 90 degrees.
3. Disconnect all of the cables from the hard drive.
4. Press the release tab on the side of the hard drive carrier that is to be removed from the hard drive cage.
5. Gently slide the hard drive carrier out of the hard drive cage.

Installing an Optical Device

Installing an Optical Device

1. Remove the front bezel from the chassis by lifting it upwards from the bottom, and pulling off the front of the chassis.
2. Remove the cover plate from the optical device slot on the front of the chassis.
3. Install the bracket rail (A) onto one side of the optical device, by inserting the pins of the bracket into the mounting holes on the sides of the optical device.
4. Slide the optical device into the chassis.
5. If desired, screws may be used where indicated below (B) to secure the optical device into chassis.

(B)

Bracket Rail (A)
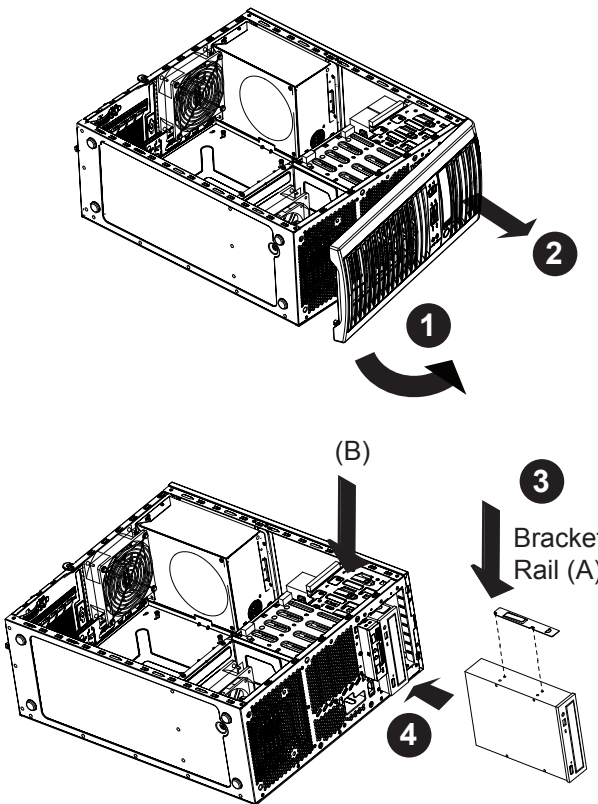
Caution

⚠ **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