SUPERMICRO SuperServer AS-2014S-TR Single Processor Server User Guide

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SUPERMICRO SuperServer AS-2014S-TR Single Processor Server

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Product Information
The SuperServer AS-2014S-TR is a powerful and reliable server designed for high-performance computing. It features two 920W redundant power supply modules, hot-swap 2.5 SATA drive bays (optional), COM Port, IPMI LAN Port, four USB 3.0 Ports, LAN Ports,and multiple expansion slots. It supports up to 8 DIMMs, 32 cores or fewer, and balanced memory population for the best memory performance.

Product Usage

Board Layout and Interface
The board layout includes JWD1 (Watch Dog Control), Unit ID switch (push-button toggle switch ON/OFF), Back panel VGA port,Back panel LAN1 and LAN2 connectors, Back panel USB 3.0 ports,Dedicated IPMI LAN port, Rear panel COM port #1, 12V 8-pin CPU core power supply connector, System cooling fan headers, 24-pin ATX

power supply connector, Power supply SMBus I2C header, Stand by power header, System cooling fan headers, Internal SATA Ports, Chassis intrusion header, SATA DOM power connector, UID switch header, Front control panel, Chassis overheat header, Internal USB 3.0 header (USB 4/5), 4-pin BMC external IC header, Front panel external speaker header, Onboard CMOS battery, and JNVMe0/SATA0~7 switch.

Heatsink Installation
To mount the heatsink, secure it using a diagonal pattern and a Torx T20 driver. Tighten the four heatsink screws evenly to 16.1 kgf-cm (14.0 lbf-in) torque.

DIMM Module Population Sequence

For the best memory performance, use a balanced memory population. The recommended population sequence for processors and their corresponding memory modules is as follows:

- 1 DIMM (supported but not recommended) – CPU1 Channel A1
- 2 DIMMs (supported but not recommended) – CPU1 Channel A1,B1
- 4 DIMMs (conditionally recommended if 32 cores or fewer) – CPU1 Channel A1, B1, C1, D1
- 8 DIMMs – CPU1 Channel A1, B1, C1, D1, E1, F1, G1, H1

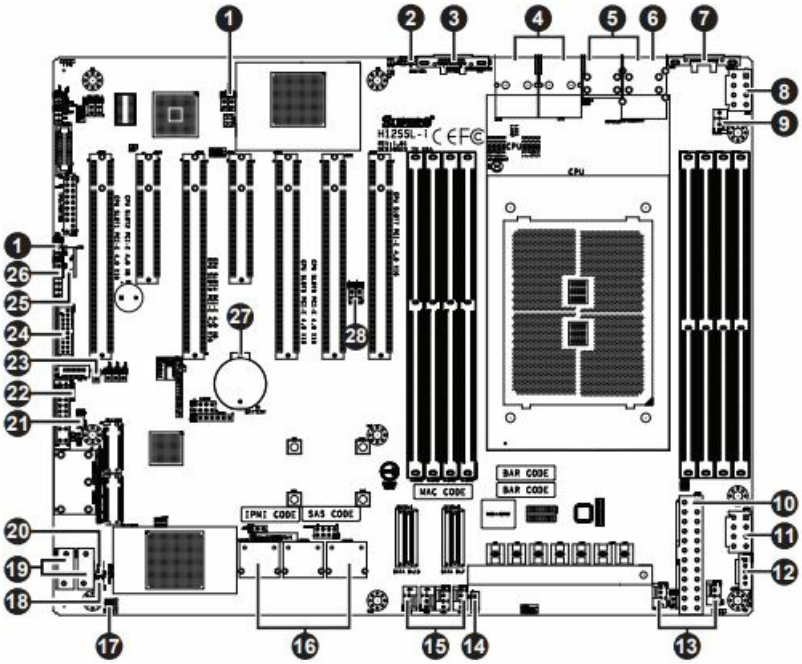
Hard Drive Installation
To remove a hot-swap drive carrier from the system, press the release button on the drive carrier to extend the drive carrier handle. Then use the drive carrier handle to pull the drive out of the chassis.

Processor Installation

To install the processor, follow these steps:

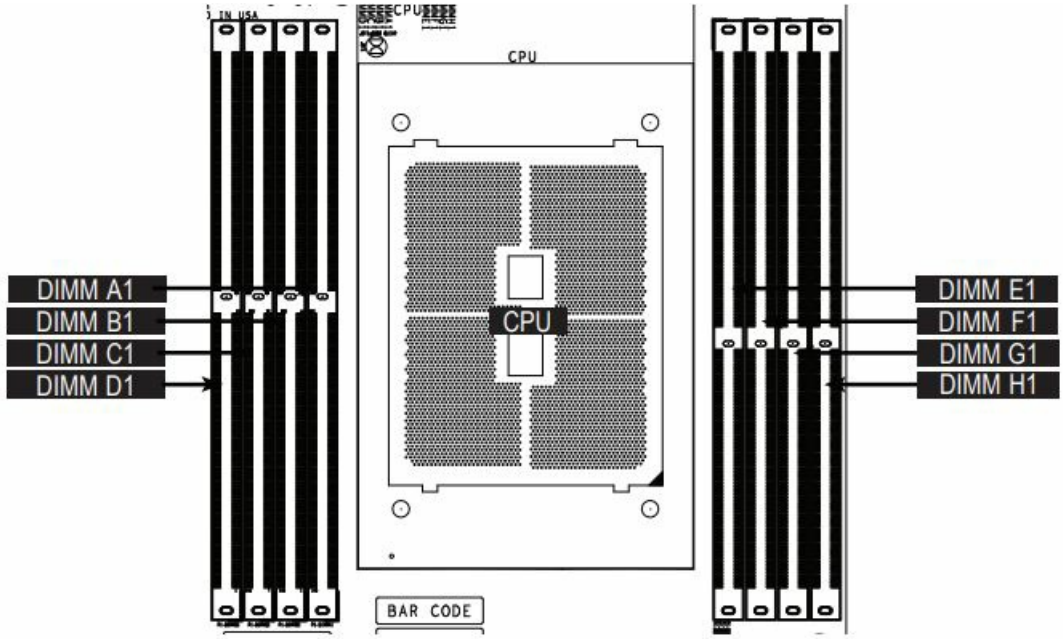
1. Use a Torx T20 driver to loosen the screws holding down Force Frame in the sequence of 3-2-1. The screws are numbered on the Force Frame next to each screw hole.
2. Raise the Force Frame.
3. Lift the Rail Frame.
4. Remove the External Cap and PnP Cover Cap.
5. Insert the Carrier Frame/CPU Package.
6. Lower the Force Frame.
7. With these instructions, you can use the SuperServer AS-2014S-TR effectively and efficiently for your computing needs.

Board Layout



1. JWD1 (Watch Dog Control)
2. Unit ID switch (push-button toggle switch ON/OFF)
3. Back panel VGA port
4. Back panel LAN1, LAN2 connectors
5. Back panel USB 3.0 ports
6. Dedicated IPMI LAN port
7. Rear panel COM port #1
8. 12V 8-pin CPU core power supply connector
9. System cooling fan headers
10. 24-pin ATX power supply connector
11. 12V 8-pin CPU core power supply connector
12. Power supply SMBus I2C header
13. System cooling fan headers
14. Stand by power header

Memory

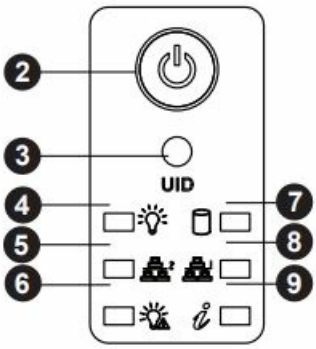


DIMM Module Population Sequence
When installing memory, please keep the following in mind:

- It is recommended that DDR4 DIMM modules of the same type, size and speed should be installed.
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support odd-numbered modules (1 or 3 modules installed). However, to achieve the best memory performance, a balanced memory population is recommended

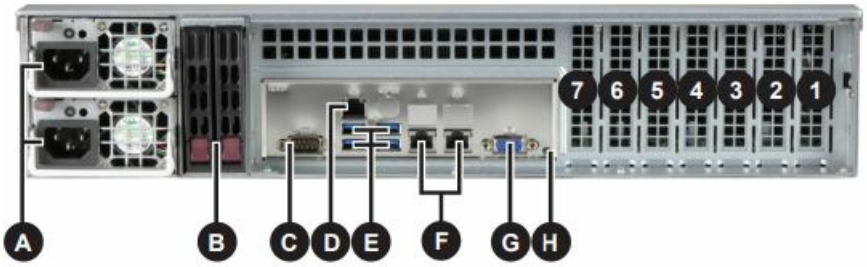
Processors and Their Corresponding Memory Modules								
CPU#	**Channel**							
	D1	C1	B1	A1	E1	F1	G1	H1
1 DIMM (supported but not recommend)								
CPU1		✓						
2 DIMMs (supported but not recommend)								
CPU1	✓	✓						
4 DIMMs (condictionally recommended if 32 cores or fewer)								
CPU1	✓	✓					✓	✓
8 DIMMs								
CPU1	✓	✓	✓	✓	✓	✓	✓	✓

Front View & Interface



Item	Description
1	Service/Asset Tag with BMC Password
2	Power Button
3	UID Button
4	Power LED
5	NIC2 LED
6	Power Fail LED
7	HDD LED
8	NIC1 LED
9	Information LED

Rear View

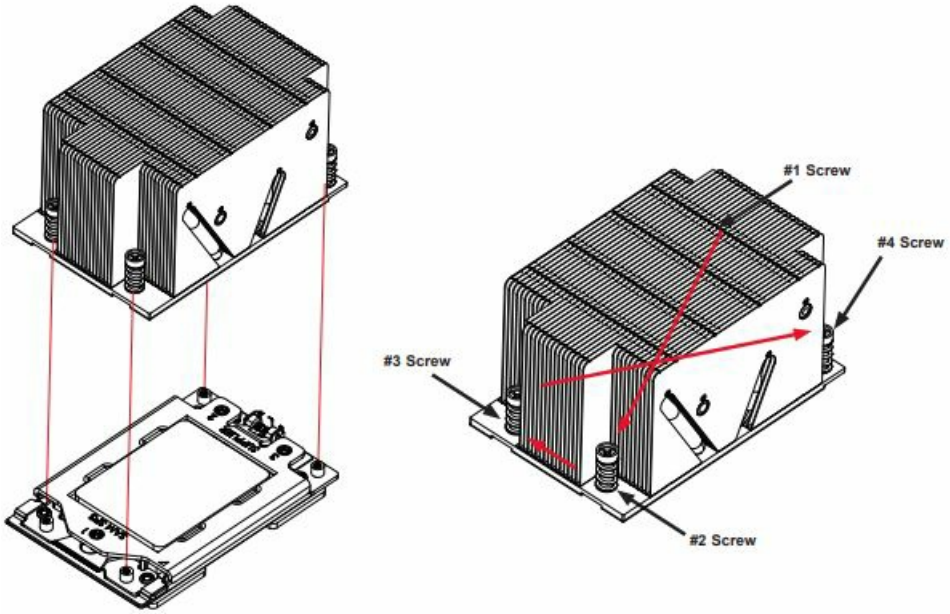


Item	Description
A	Two 920W Redundant Power Supply Modules*
B	Two hot-swap 2.5" SATA drive bays *(optional)*
C	COM Port
D	IPMI LAN Port
E	Four USB 3.0 Ports
F	LAN Ports
G	VGA Port
H	UID LED

Expansion Slots	
Item	**Description**
1	PCIe 4.0 x16 *(low-profile)*
2	PCIe 4.0 x 8 *(low-profile)*
3	PCIe 4.0 x16 *(low-profile)*
4	PCIe 4.0 x 8 *(low-profile)*
5	PCIe 4.0 x16 *(low-profile)*
6	PCIe 4.0 x16 *(low-profile)*
7	PCIe 4.0 x16 *(low-profile)*

Heatsink Installation

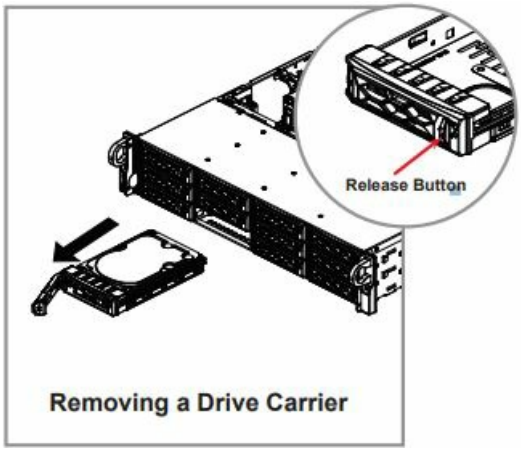
1. Mounting the Heatsink
2. Securing the Heatsink



Hard Drive Installation

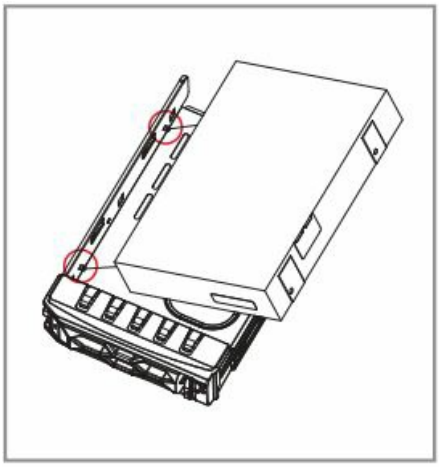
Removing a Hot-Swap Drive Carrier from the System

1. Press the release button on the drive carrier, which will extend the drive carrier handle.
2. Use the drive carrier handle to pull the drive out of the chassis.



Installing a 3.5” Drive

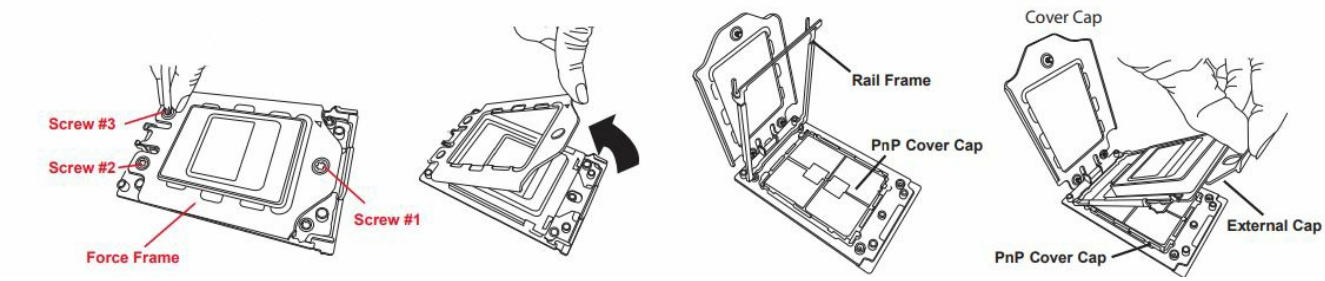
1. Remove the dummy drive, which comes pre-installed in the drive carrier. Pull out the two locking clasps on the right outside of the carrier and lift out the dummy drive.
2. Position the drive above the carrier with the PCB side facing down and the connector end toward the rear of the carrier.
3. Tilt the drive to insert it onto the two posts on the left inside of the carrier. Push the right side of the drive fully into the carrier and allow the two spring locking clasps to secure the drive.
4. Insert the drive carrier into its bay, keeping the release button on the right. When the carrier reaches the rear of the bay, the release handle will retract.
5. Push the handle in until it clicks into its locked position.



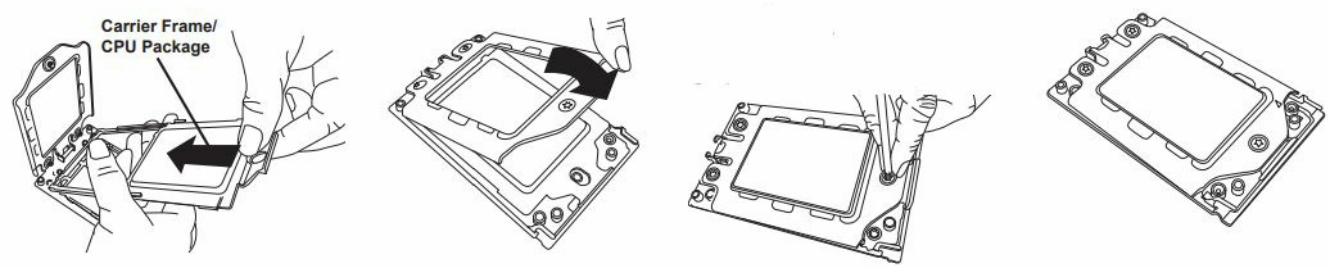
CPU Installation

Processor Installation

1. Removing the Processor Force Frame Use a Torx T20 driver to loosen the screws holding down Force Frame in the sequence of 3-2-1. The screws are numbered on the Force Frame next to each screw hole.
2. Raising the Force Frame
3. Lifting the Rail Frame
4. Removing the External Cap and PnP Cover Cap



5. Inserting the Carrier Frame/CPU Package
6. Lowering the Force Frame
7. Securing the Force Frame
   Secure the screws in the order 1-2-3, tightening to 16.1 kgf-cm (14 lbf-in) of torque. The Force Frame secures both the Rail Frame and CPU Package. Caution: Tightening must be executed in proper 1-2-3 sequence to avoid causing catastrophic damage to the socket or CPU Package.
8. The Force Frame Secured



Default Cable Routing

MB/AOC Connector	BP/Riser	Drive Qty/PCIe	MC Cable P/N
PCIE1A (NVME0/1)	CN3 (RSC-D2-666G4)	PCIe x16	CBL-SAST-1297LP-85
PCIE1B (NVME2/3)	CN4 (RSC-D2-666G4)		CBL-SAST-1297LP-85
PCIE2A/2B (NVME4/5)	CN3 (RSC-D2R-666G4)	PCIe x16	CBL-SAST-1296LP-85
PCIE2C/2D (NVME 6/7)	CN4 (RSC-D2R-666G4)		CBL-SAST-1296LP-85
SATA4-7 (NVME9)	CN1 (BPN-SAS3-LA26A-N12)	4 SATA Drives	CBL-SAST-1285LP-100
SATA8-15 (NVME12/13)	CN2/CN3 (BPN-SAS3-LA26A-N12)	8 SATA Drives	CBL-SAST-1236-100

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.
- **WARNING:**

  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

http://www.supermicro.com

Documents / Resources

	SUPERMICRO SuperServer AS-2014S-TR Single Processor Server [pdf] User Guide SuperServer AS-2014S-TR Single Processor Server, SuperServer AS-2014S-TR, Single Processor Server, Processor Server, Server

References

- Supermicro Data Center Server, Blade, Data Storage, AI System
- Safety Information | Supermicro
- Support | Supermicro