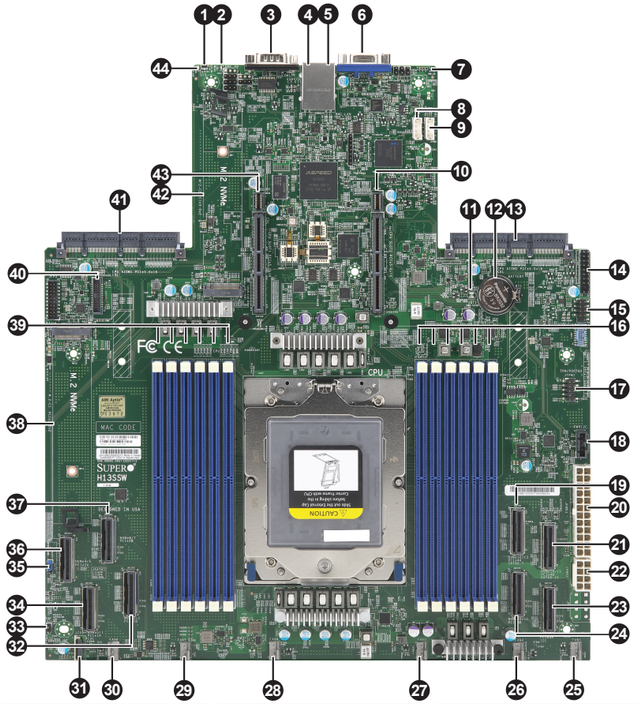
# SUPERMICRO SuperServer AS -2015CS-TNR Quick Reference Guide

## Board Layout



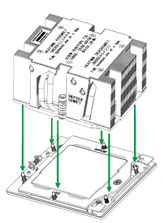
| Item | Description |
|---|---|
| 1 | Unit ID Switch |
| 2 | BMC Heartbeat LED |
| 3 | Rear Panel COM Port 1 |
| 4 | USB 3.0 Ports 4/5 |
| 5 | RJ45 Dedicated IPMI LAN Port |
| 6 | Rear Panel VGA Port |
| 7 | Power LED |
| 8 | Inlet Sensor Header |
| 9 | 4-Pin BMC External I²C Header (For an IPMI-Supported Card) |
| 10 | Right WIO Riser Slot |
| 11 | CMOS Clear |
| 12 | Onboard Battery |
| 13 | Supermicro® Advanced I/O Module (AIOM) Slot 2 |
| 14 | Front Control Panel Header |
| 15 | USB 2.0 Ports 0/1 |

| Item | Description |
|---|---|
| 16 | DIMMG1-L1 |
| 17 | TPM / Port 80 |
| 18 | Power Supple SMBus I²C Header |
| 19 | NVMe12/13 / SATA0-7 Hybrid Ports |
| 20 | 24-Pin ATX Power Supply Connector |
| 21 | NVMe14/15 / SATA8-15 Hybrid Ports |
| 22 | 12V 8-Pin CPU Core Power Supply Connector |
| 23 | NVMe8/9 Ports |
| 24 | NVME10/11 Ports |
| 25 | FAN1 |
| 26 | FAN2 |
| 27 | FAN3 |
| 28 | FAN4 |
| 29 | FAN5 |
| 30 | FAN6 |

| Item | Description |
|---|---|
| 31 | Front Control Panel Header 1 |
| 32 | NVMe2/3 |
| 33 | Chassis Intrusion Header |
| 34 | NVMe0/1 |
| 35 | JSATA1: 3-Pin Connector for HDD |
| 36 | NVMe4/5 |
| 37 | NVMe6/7 |
| 38 | M.2-C1 PCIe Interface |
| 39 | DIMMA1-F1 |
| 40 | NCSI Connector |
| 41 | Supermicro® Advanced I/O Module (AIOM) Slot 1 |
| 42 | M.2-C2 PCIe Interface |
| 43 | Left WIO Rider Slot |
| 44 | UID LED |

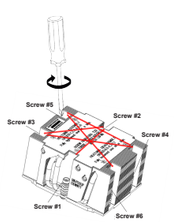
## Heatsink Installation

1. Mounting the Heatsink

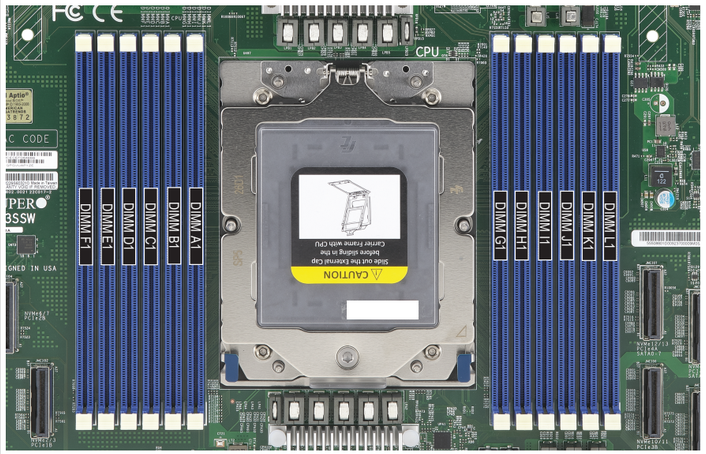


2. Securing the Heatsink

Using a diagonal pattern and a Torx T20 driver, tighten the six heatsink screws evenly to 12.5-15.0 kgf-cm (10.85-13.01 lbf-in) torque.




## Memory




### DIMM Module Population Sequence

There is no specific order or sequence required when installing memory modules. However, do keep the following in mind:

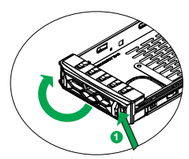
- Mixed DIMM speeds can be installed. However, all DIMMs will run at the speed of the slowest DIMM.
- The motherboard will support odd-numbered modules (1 or 3 modules installed). Populating with an even number of DIMMs will result in interleaved memory. However, to achieve the best memory performance, fully populate the motherboard with validated memory modules.

**DIMM Population Guide**

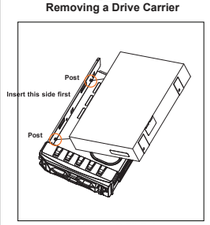
| Type | 1 DIMM Per Channel | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F1 | E1 | D1 | C1 | B1 | A1 | | G1 | H1 | I1 | J1 | K1 | L1 |
| 1 DIMM* | | | | | | V | | | | | | | |
| 2 DIMMs* | | | | | | V | | V | | | | | |
| 4 DIMMs* | | | | V | | V | | V | | V | | | |
| 6 DIMMs* | | | | V | V | V | CPU | V | V | V | | | |
| | | | | | | | | | | | | | |
| 8 DIMMs** | | V | | V | V | V | | V | V | V | | V | |
| 10 DIMMs** | | V | V | V | V | V | | V | V | V | V | V | |
| | | | | | | | | | | | | | |
| 12 DIMMs*** | V | V | V | V | V | V | | V | V | V | V | V | V |

* AMD does not recommend installing 1, 2, 4, or 6 DIMMs per CPU socket, as it may impact performance.
** Recommended for 16-64-core CPUs
*** Preferred for 84-core or higher CPUs, and recommended for all other CPUs

## Hard Drive Installation



Removing a Drive Carrier




Installing a 3.5" Drive

### Removing a Hot-Swap Drive Carrier

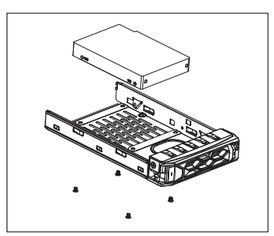
1. Press the release button to extend the drive carrier handle.
2. Use the handle to pull the drive out of the chassis.

### Installing a 3.5" Drive

1. Position the drive with the PCB side facing down and the connector end toward the rear of the tray.
2. Tilt the drive to insert it onto the two posts on the left inside of the tray, then push in place to secure the drive.
3. Insert the drive tray into the bay, with the release button on the right, until it clicks into place.

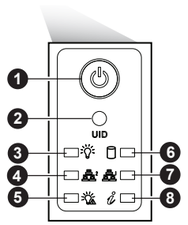
### Installing a 2.5" Drive

1. Screw the drive into the tray using the four screws underneath the tray.
2. Insert the drive tray into the bay, with the release button on the right, until it clicks into place.



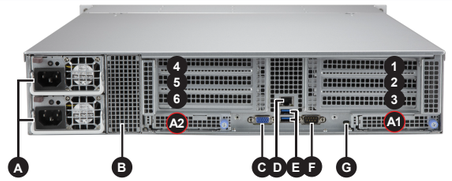
Installing a 2.5" Drive

## Front View & Interface


| Item | Description |
|---|---|
| 1 | Power Button |
| 2 | UID Button |
| 3 | Power LED |
| 4 | NIC2 LED |
| 5 | Power Fail LED |
| 6 | HDD LED |
| 7 | NIC1 LED |
| 8 | Information LED |

## Rear View




| Item | Description |
|---|---|
| A | Redundant Power Supply Modules* |
| B | Rear drive kit for two 2.5" drive bays *(optional)* |
| C | VGA Port |
| D | BMC LAN Port |
| E | Two USB 3.0 Ports |
| F | COM Port |
| G | UID LED |

**Expansion Slots**

| Item | Description |
|---|---|
| 1 | PCIe 5.0 x16 *(FHFL)* |
| 2 | PCIe 5.0 x8 *(FHFL, optional**)* |
| 3 | PCIe 5.0 x16 *(FHHL)* |
| 4 | PCIe 4.0 x8 *(FHFL, optional**)* |
| 5 | PCIe 5.0 x16 *(FHFL)* |
| 6 | PCIe 5.0 x16 *(FHHL)* |
| A1 | PCIe 5.0 x16 AIOM slot *(NCSI)* |
| A2 | PCIe 5.0 x16 AIOM slot |

** Full redundancy is based on the configuration and application load.*

*** PCIe Slots 2 and 4 are not available with NVMe drive option. Contact Support for configurations that require optional PCIe slots to be enabled.*

## CPU Installation

1. Removing the Processor Force Frame

Use a Torx T20 screwdriver to loosen the screw holding down the force frame.



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

Using a Torx T20-bit torque screwdriver set to 12.5-15.0 kgfcm (10.85-13.01 lbf-in.), secure the force frame in place.



8. The Force Frame Secured



## Default Cable Routing

**12x SATA**

| Connector on Board/Card | Connection Backplane | Drive Bay | SMC Cable P/N |
|---|---|---|---|
| JMCIO7 NVMe12/13 PCIe4A SATA0-7 (MBD-H13SSW) | CN1 | 0-3 | CBL-MCIO-1243S4Y |
| | CN2 | 4-7 | |
| JMCIO8 NVMe14/15 PCIe4B SATA8-15 (MBD-H13SSW) | CN3 | 8-11 | CBL-MCIO-1227EQS4 |

## 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