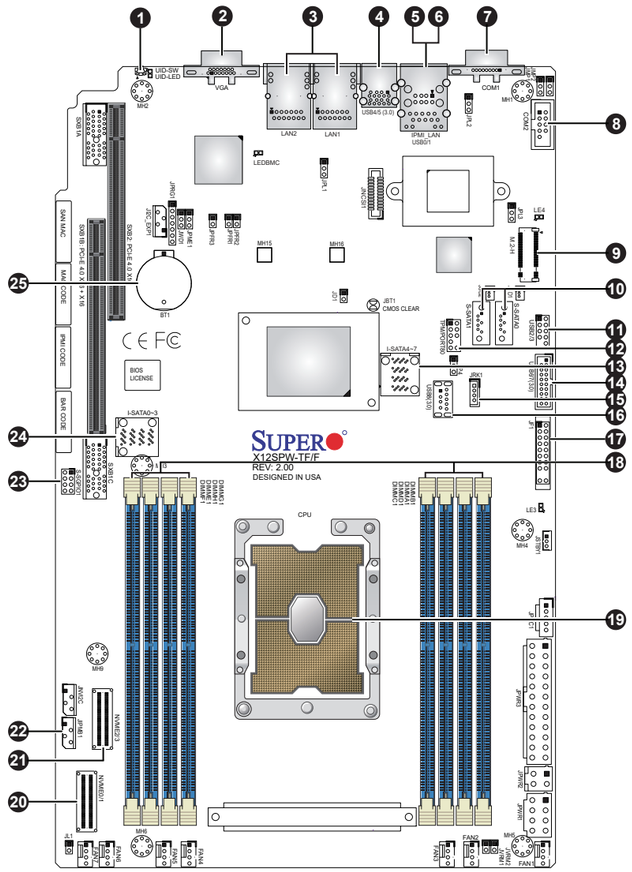
# SUPERMICRO® SuperServer 110P-FWTR Quick Reference Guide

## Board Layout



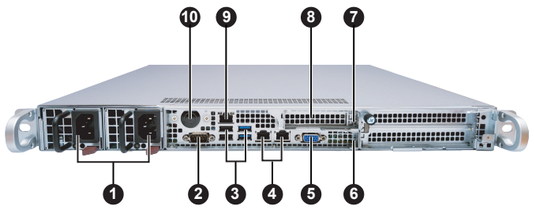

| Item | Description |
|---|---|
| 1 | UID Button (Unit Identifier Button) |
| 2 | VGA Port |
| 3 | Two 10GbE(-TF)/1GbE(-F) LAN Ports |
| 4 | USB 3.2 Gen1 Port |
| 5 | Dedicated LAN for IPMI |
| 6 | USB 2.0 Port |
| 7 | COM Port (Serial Port) |
| 8 | COM Port Header (Serial Port) |
| 9 | M.2 PCI-E/SATA Interface |
| 10 | S-SATA0/1: SATA 3.0 Ports with SATA DOM Power |
| 11 | USB 2.0 Header |
| 12 | TPM Header |
| 13 | I-SATA4-7: Internal SATA Ports |

| Item | Description |
|---|---|
| 14 | USB 3.2 Gen1 Header |
| 15 | Intel RAID Key Header |
| 16 | USB 3.2 Gen1 Type-A Port |
| 17 | Front Control Panel Header |
| 18 | DIMM A1-H1 Slots |
| 19 | CPU |
| 20 | NVME0/1: PCI-E 4.0 x8 Slimline SAS Connector |
| 21 | NVME2/3: PCI-E 4.0 x8 Slimline SAS Connector |
| 22 | JIPMB1 4-pin BMC External I2C Header |
| 23 | S-SGPIO Header |
| 24 | I-SATA0-3: Internal SATA Ports |
| 25 | Onboard CMOS Battery |

## System Overview

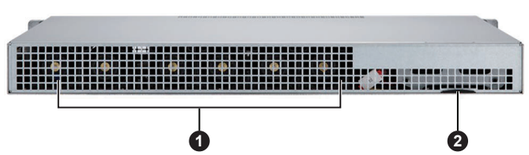
| | |
|---|---|
| **Chassis** | CSE-515B-R801W with PWS 800w<br>CSE-515B-R601W with PWS 600w |
| **Motherboard** | X12SPW-TF |
| **Processor Support** | 3rd Gen Intel® Xeon® Scalable processors up to 205W |
| **Memory** | Eight DIMM slots, up to 2TB ECC LRDIMM, DDR4-3200 MHz |
| **Drive Support** | Two internal 2.5" SATA3 drive bays |
| **Expansion Slots** | One PCIe 4.0 x16 LP slot<br>Two PCIe 4.0 x16 FHFL slots |
| **I/O Ports** | Two LAN 10GbE ports<br>One dedicated IPMI/KVM LAN port<br>One VGA port<br>One serial port<br>Two USB 3.2 Gen 1 ports<br>Two USB 2.0 ports |
| **System Cooling** | Six (4cm x 4cm x 5.6cm) counter-rotating fans<br>Passive Heatsink for 1U System<br>One air shroud for CPU<br>One optional air shroud for PCIe cards |
| **Power** | Redundant DC 600W<br>Redundant AC 800W |
| **Form Factor** | 1U rackmount,<br>(WxHxD) 17.2 x 1.7 x 16.9 in. (437 x 43 x 429 mm) |

## Front View and Features



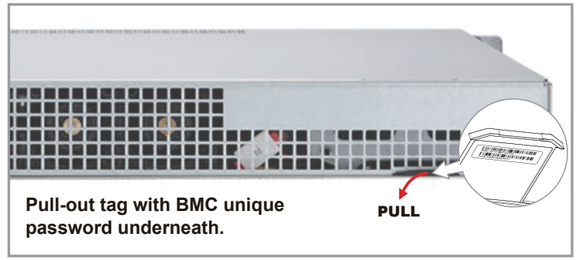
| Item | Description |
|---|---|
| 1 | Two redundant power supply modules |
| 2 | Serial port |
| 3 | Two USB 3.2 Gen 1 ports and two USB 2.0 ports |
| 4 | LAN port; 2x 10GbE BaseT port(s) |
| 5 | VGA Port |
| 6 | PCIe 4.0 x16 Full-height full-length slot for PCIe expansion card |
| 7 | PCIe 4.0 x16 Full-height full-length slot for PCIe expansion card |
| 8 | PCIe 4.0 x16 low-profile slot for PCIe expansion card |
| 9 | Dedicated IPMI LAN |
| 10 | Power Button with Status LED |

## Rear View



| Item | Description |
|---|---|
| 1 | 6 Heavy Duty Fans with Optimal Fan Speed Control |
| 2 | Service Tag |

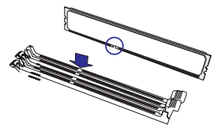
## BMC ADMIN User Password

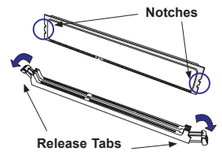



Each system comes with a unique default password for the ADMIN user. This can be found on a sticker on the motherboard and a sticker underneath the service tag on chassis. If necessary, the password can be reset by the Supermicr IPMICFG tool.
For more information, please visit:
https://www.supermicro.com/en/solutions/management-software/bmc-resources

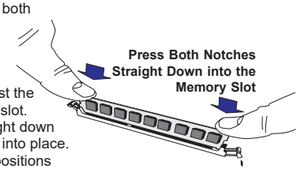

## Memory

### DIMM Installation






1. Insert the desired number of DIMMs into the memory slots based on the recommended DIMM population table.
2. Push the release tabs outwards on both ends of the DIMM slot to unlock it.
3. Align the key of the DIMM module with the receptive point on the memory slot.
4. Align the ends of the module against the receptive points on the ends of the slot.
5. Press the ends of the module straight down into the slot until the module snaps into place.
6. Press the release tabs to the lock positions to secure the DIMM module into the slot.



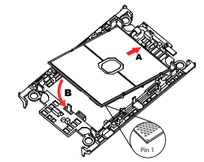

| 1 CPU, 8-DIMM Slots | |
|---|---|
| **Number of DIMMs** | **Memory Population Sequence** |
| 1 | DIMMA1 |
| 2 | DIMMA1 / DIMME1 |
| 4 | DIMMA1 / DIMME1 / DIMMC1 / DIMMG1 |
| 6 | DIMMA1 / DIMME1 / DIMMC1 / DIMMG1 / DIMMB1 / DIMMF1 |
| 8 | DIMMA1 / DIMME1 / DIMMC1 / DIMMG1 / DIMMB1 / DIMMF1 / DIMMD1 / DIMMH1 |

| Type | Ranks Per DIMM and Data Width | DIMM Capacity (GB) | | Speed (MT/s); Voltage (V); Slot Per Channel (SPC) and DIMM Per Channel (DPC) *Data below assumes 2 SPC unless otherwise noted. |
|---|---|---|---|---|
| | | 8 Gb | 16 Gb | 1DPC |
| | | | | 1.2V |
| RDIMM | SRx8 | 8 GB | 16 GB | 3200 |
| | SRx4 | 16 GB | 32 GB | |
| | DRx8 | 16 GB | 32 GB | |
| | DRx4 | 32GB | 64 GB | |
| RDIMM-3DS | (4R/8R) x4 | 2H-64F GB<br>4H-128 GB | 2H-128 GB<br>4H 256 GB | 3200 |
| LRDIMM | QRx4 | 64 GB | 128 GB | 3200 |
| LRDIMM-3DS | (4R/8R) X4 | 4H-128 GB | 2H-128 GB<br>4H-256 GB | 3200 |

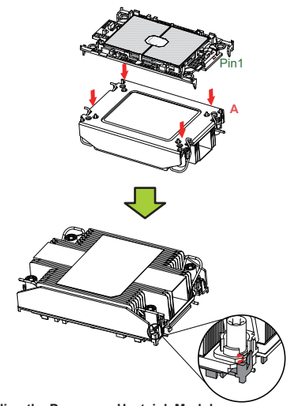
## CPU Installation and Removal

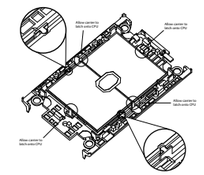
Supports a single Intel Xeon Ice Lake Scalable Processor (LGA 4189)

**A. Creating the Intel Ice Lake Carrier Assembly**
1. Locate small gold triangle (Pin 1) on processor and corresponding hollowed triangle on carrier.
2. Using the triangles as a guide, carefully align and place Point A of the processor into the carrier. Gently snap into place to fasten onto Point B.

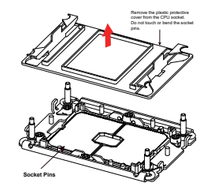



**B. Assembling the Processor Heatsink Module (PHM)**
1. Turn the heatsink upside down, and hold the processor carrier assembly with the gold contacts facing up.
2. Align the triangle (Pin 1) on the assembly with the triangle cutout "A" of the heatsink and press into place such that the clips lock in.

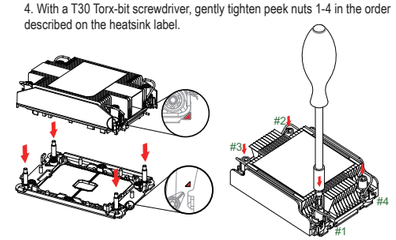


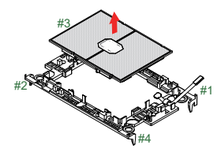
**C. Preparing the CPU Socket for Installation**
Gently pull off the plastic protective cover by one corner to remove it from the CPU socket.




**D. Installing the Processor Heatsink Module**
1. Align the golden triangle (Pin 1) of the processor with the printed triangle on the socket. All four holes should be aligned.
2. Ensure that the four rotating wires are in an "up" (unlocked) position.
3. Mount the PHM onto the CPU socket on the motherboard and gently press into place. Flip the rotating wires to the sides to a locked position.
4. With a T30 Torx-bit screwdriver, gently tighten peek nuts 1-4 in the order described on the heatsink label.




**Removing the Processor Heatsink Module**
1. Using a T30 Torx-bit screwdriver, loosen the four peek nuts in a backward sequence of 4, 3, 2, 1.
2. Ensure that the four rotating wires are in an "up" (unlocked) position.
3. Gently lift the module up to remove it from the socket.
4. Flip the PHM with the gold contacts facing up. Unlock the lever and gently remove 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

**⚠ 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