

SuperWorkstation® SYS-730A-I



USER'S MANUAL

Revision 1.0a

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Manual Revision 1.0a

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Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the system. Installation and maintenance should be performed by certified service technicians only.

Please refer to the SYS-730A-I system specifications page on our website for updates on supported memory, processors and operating systems (http://www.supermicro.com).

Notes

For your system to work properly, please follow the links below to download all necessary drivers/utilities and the user's manual for your system.

- Supermicro product manuals: http://www.supermicro.com/support/manuals/
- Product drivers and utilities: https://www.supermicro.com/wdl/driver/
- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm

If you have any questions, please contact our support team at: support@supermicro.com

This manual may be periodically updated without notice. Please check the Supermicro website for possible updates to the manual revision level.

Secure Data Deletion

A secure data deletion tool designed to fully erase all data from storage devices can be found on our website: https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9_Secure_Data_Deletion_Utility/

Warnings

Special attention should be given to the following symbols used in this manual.



Warning! Indicates important information given to prevent equipment/property damage or personal injury.



Warning! Indicates high voltage may be encountered when performing a procedure.

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Chapter 1

Introduction

1.1 Overview

This chapter provides a brief outline of the functions and features of the SuperWorkstation SYS-730A-I. The following provides an overview of the specifications and capabilities.

System Overview		
Motherboard	X12DAi-N	
Chassis	CSE-735D4-1K26B	
Processor Support	Dual Intel Xeon 3rd Gen Intel Xeon Scalable Processors (Socket P+) with up to 40 cores and a thermal design power (TDP) of up to 270 W Note: Refer to the motherboard specifications pages on our website for updates to supported processors. Certain CPU SKUs are conditionally supported. Please contact Supermicro Technical Support for additional information about specialized system optimization.	
Chipset	Intel PCH C261A	
Memory	Up to 4 TB of 3DS LRDIMM/LRDIMM/3DS RDIMM/RDIMM DDR4 (288-pin) ECC memory with speeds of 3200/2933/2666 MHz in 16 memory slots and up to 4 TB of Intel Optane PMem 200 Series with speeds of up to 3200 MHz Note: PMem 200 Series are supported on 3rd gen Intel Xeon Scalable Platinum, Gold and selected Silver processors.	
Drive Support	Four fixed internal 3.5" SATA drive bays Two onboard NVMe connectors (optional cables required for NVMe support) One onboard VROC key header	
Expansion Slots	One PCIe 4.0 x8 slot Five PCIe 4.0 x16 slots Two PCIe 4.0 x4 M.2 slots in the 2280 and 22110 form factors	
Networking	Two 1GbE ports	
I/O Ports	Front: two USB 3.2 Gen 1 ports, one USB 3.2 Gen 2 Type-C port, one line-out port, one mic-in port Rear: four USB 3.2 Gen 1 ports, one USB 3.2 Gen 2 port, 7.1 HD Audio ports, one VGA port Onboard: one serial COM header, one buzzer header, eight SATA headers	
System Cooling	One rear fan One front fan Two CPU heatsinks (sold separately)	
Power	One PS2 1200 W Multi-output 80+ Platinum power supply	
Form Factor	Mid-Tower (WxHxD) 7.6 x 16.7 x 21.2 in. (193 x 424 x 536 mm)	

Notes: A Quick Reference Guide can be found on the product page of the Supermicro website. The following safety models associated with the SYS-730A-I have been certified as compliant with UL and CSA: 735-S12X12, 735-12.

1.2 System Features

The SYS-730A-I is a mid-tower system. It is useful for small/medium businesses, professional video editing, or 3D modeling. The following views of the system display the main features.

Front View

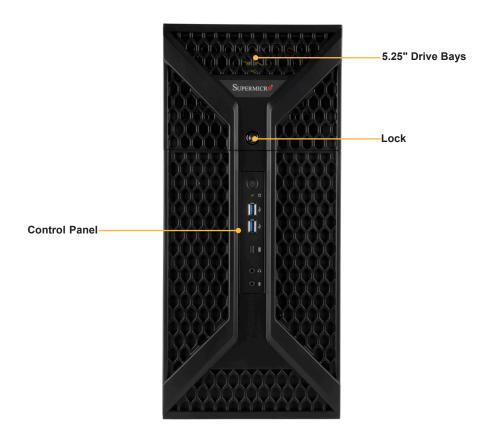


Figure 1-1. Front View

System Features: Front		
Feature	Description	
Lock	Front Bezel Lock	
5.25" Drive Bays For optional DVD-ROM drives or mobile rack module		
Control Panel	Front control panel with power button, LEDs, USB and audio ports	

Control Panel

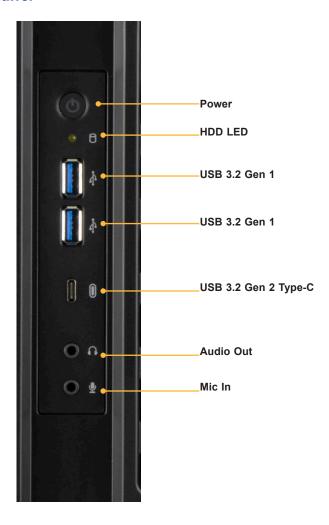


Figure 1-2. Control Panel

Control Panel Features		
Feature	Description	
Power Button with LED	The main power switch applies or removes primary power from the power supply to the system but maintains standby power.	
HDD LED	Indicates activity on the storage drives when flashing.	
USB Ports	Two front accessible USB 3.2 Gen 1 ports and one USB 3.2 Gen 2 Type-C port	
Audio out	Audio out port	
Mic in	Mic in port	

Rear View

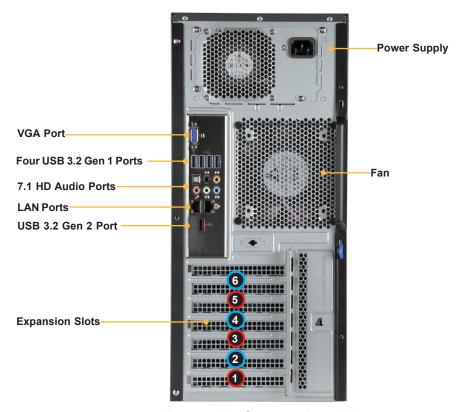


Figure 1-3. System: Rear View

System Features: Rear		
Feature	Description	
Power Supply	One PS2 1200W Multi-output 80+ Platinum power supply	
Fan	Internal cooling fan	
Networking	Two 1GbE LAN ports	
USB	Four rear USB 3.2 Gen 1 ports and one rear USB 3.2 Gen 2 port	
VGA	VGA port	
Audio	7.1 HD Audio ports	
Expansion Slots	Six PCIe expansion slots	

Expansion Slot Locations		
Item	Slot Name	Description
1,3,5	JPCIE1/3/5	PCIe 4.0 x16 slot (CPU1)
2,4	JPCIE2/4	PCIe 4.0 x16 slot (CPU2)
6	JPCIE6	PCIe 4.0 x8 slot (CPU2)

CPU1 CPU2

1.3 Motherboard Layout

Below is a layout of the X12DAi-N motherboard with jumper, connector and LED locations shown. See the table on the following page for descriptions. For detailed descriptions, pinout information and jumper settings, refer to Chapter 4 or the Motherboard Manual.

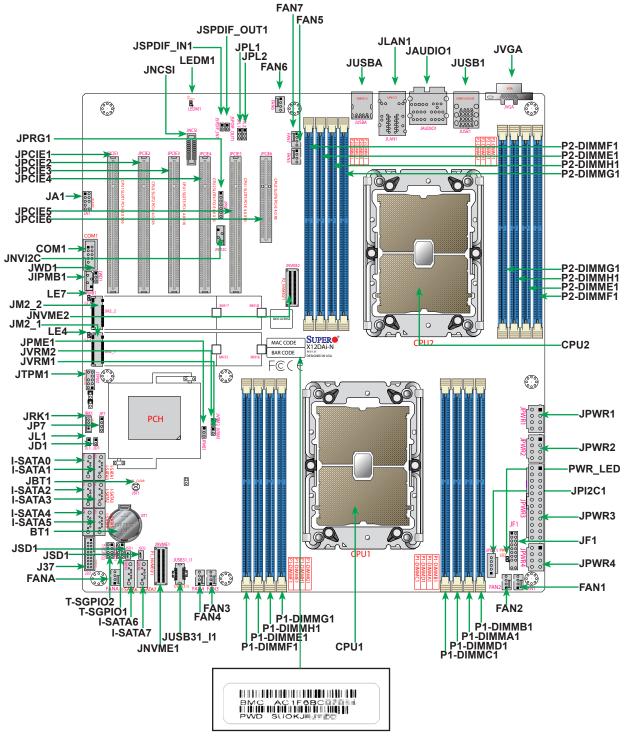


Figure 1-4. Motherboard Layout

Quick Reference Table

Jumper	Description	Default Setting		
JBT1	CMOS Clear	Open (Normal)		
JPME1	ME Recovery	Pins 1-2 (Normal)		
JPL1	LAN1 Enable/Disable	Pins 1-2 (Enabled)		
JPL2	LAN2 Enable/Disable	Pins 1-2 (Enabled)		
JWD1	Watchdog Timer	Pins 1-2 (Reset)		
LED	Description	Status		
LE4/LE7	M.2 LED	Blinking Green: Device Working		
LEDM1	BMC Heartbeat LED	Blinking Green: BMC Normal		
PWRLED	Onboard Power LED	Solid Green: Power On		
Connector	Description			
Audio (JA1)	HD Audio connector for fi	ront access		
BT1	Onboard CMOS Battery			
COM1	COM/Serial Port header f	COM/Serial Port header for front access		
FANA, FAN1 ~ FAN7,	CPU/System cooling fan	CPU/System cooling fan headers		
I-SATA0/1/2/3/4/5	SATA 3.0 connection hea	SATA 3.0 connection headers supported by the Intel PCH		
I-SATA6, I-SATA7	SATA 3.0 connection hea	SATA 3.0 connection headers with SATA DOM Power supported by the Intel PCH		
J37	Front-accessible USB 3.2	Front-accessible USB 3.2 Gen1 type A connector (USB 5/6)		
JAUDIO1	Audio port on the I/O bac	Audio port on the I/O back panel		
JD1	Speaker/buzzer header (ı	Speaker/buzzer header (use in conjunction with an external speaker/buzzer) (optional)		
JF1	Front Control Panel Head	control Panel Header		
JIPMB1	4-pin BMC External I ² C H	4-pin BMC External I²C Header (for a BMC card)		
JLAN1 (LAN1)	Gigabit LAN (1G) Etherne	Gigabit LAN (1G) Ethernet port on the IO back panel supported by PCH and BMC		
JLAN1 (LAN2)	Gigabit LAN (1G) Etherne	Gigabit LAN (1G) Ethernet port on the IO back panel supported by PCH		
JL1	Chassis Intrusion Header	Chassis Intrusion Header		
JM2_1, JM2_2	M.2 PCIe 4.0 x4 Slot (Su	M.2 PCIe 4.0 x4 Slot (Supports M-Key 2280 and 22110) supported by CPU1		
JNCSI	NCSI header	NCSI header		
JNVI2C	NVMe SMBus (I ² C) head	NVMe SMBus (I ² C) headers used for PCIe hot-plug SMBus clock & data connections		
JNVME1, JNVME2	•	NVMe PCle 4.0 x8 ports (Note : When installing an NVMe device on a motherboard, please be sure to connect JNVME1 first for your system to work properly.)		
JP7	USB header for card read	USB header for card reader		
JPCIE1/2/3/4/5 (slot 1-5)	CPU PCIe 4.0 x16 slots (CPU2)	CPU PCIe 4.0 x16 slots (slot1/slot3/slot5 supported by CPU1, slot2/slot4 supported by CPU2)		
JPCIE6 (slot 6)	CPU PCIe 4.0 x8 slot sup	CPU PCIe 4.0 x8 slot supported by CPU2		
JPI2C1	Power System Managem	Power System Management Bus (SMB) I ² C Header		
JPRG1	Complex-programmable I	ogical device (CPLD) header		

Connector	Description
JPWR1, JPWR2, JPWR4	8-pin Power Connector
JPWR3	24-pin ATX Power Connector
JSPDIF_IN, JSPDIF_OUT	SPDIF (Sony/Philips Digital Interconnect Format) Audio In/Out connectors
JTPM1	Trusted Platform Module/Port 80 Connector
JUSB1 (USB0/1/2/3)	Back panel USB 3.2 Gen 1 ports
JUSBA (USB4)	Back panel USB 3.2 Gen 2 type A port
JUSB31_I1 (USB7)	Front accessible USB 3.2 Gen 2 header
JVGA	VGA port on the I/O back panel
JVRM1	VRM SMB clock to BMC
JVRM2	VRM SMB data to BMC
JSD1, JSD2	SATA DOM (Disk-on-Module) power connectors 1/2
MH15, MH16, MH17, MH18	M.2 Mounting Holes
T-SGPIO1, T-SGPIO2	General Purpose Serial I/O ports
VROC (JRK1)	Intel VROC RAID Key header for NVMe SSD

Motherboard Block Diagram

X12DAi-N6

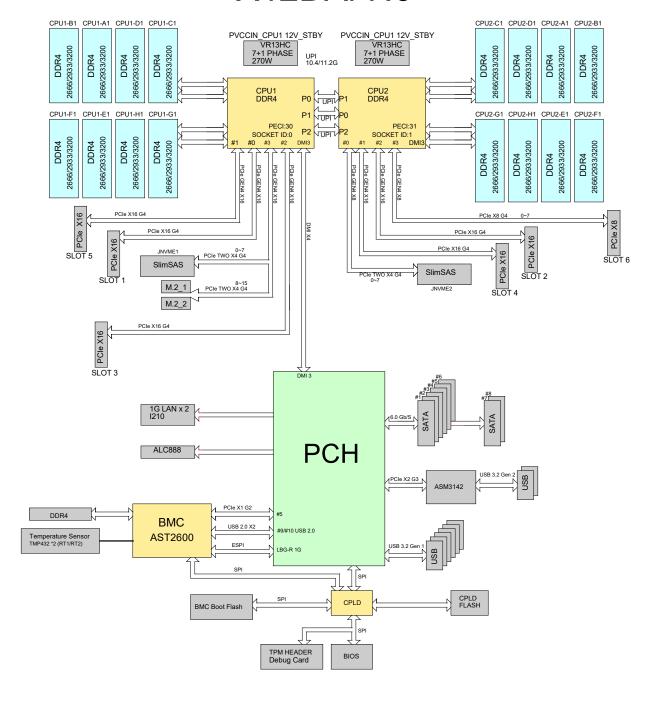


Figure 1-5. Motherboard Block Diagram

Chapter 2

System Installation

2.1 Overview

This chapter provides advice and instructions for unpacking and preparing your system for setup. If your system is not already fully integrated with processors, system memory etc., refer to <u>Chapter 3</u> for details on installing those specific components.

Caution: Electrostatic Discharge (ESD) can damage electronic components. To prevent such damage to PCBs (printed circuit boards), it is important to use a grounded wrist strap, handle all PCBs by their edges and keep them in anti-static bags when not in use.

2.2 Unpacking the System

Inspect the box in which the SuperWorkstation SYS-730A-I was shipped, and note if it was damaged in any way. If any equipment appears damaged, file a damage claim with the carrier who delivered it.

The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. It will also require a grounded AC power outlet nearby. Be sure to read the precautions and considerations noted in <u>Appendix A</u>.

2.3 Preparing for Setup

Please read this section in its entirety before you begin the installation.

Choosing a Setup Location

- The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.
- This product is not suitable for use with visual display workplace devices according to §2
 of the German Ordinance for Work with Visual Display Units.

Workstation Precautions

• Review the electrical and general safety precautions in Appendix A.

- Use a regulating uninterruptible power supply (UPS) to protect the workstation from power surges, voltage spikes and to keep your system operating in case of a power failure.
- Allow the power supply units and components to cool before touching them.
- To maintain proper cooling, always keep all chassis panels closed when not being serviced.

Chapter 3

Maintenance and Component Installation

This chapter provides instructions on installing and replacing main system components. To prevent compatibility issues, only use components that match the specifications and/or part numbers given.

Installation or replacement of most components require that power first be removed from the system. Please follow the procedures given in each section.

3.1 Removing Power

Use the following procedure to ensure that power has been removed from the system.

- 1. Use the operating system to power down the system.
- 2. After the system has completely shut down, disconnect the AC power cords from the power strip or outlet.
- 3. Disconnect the power cords from the power supply modules.

3.2 Accessing the System

The CSE-735D4-1K26B has removable side covers for interior access.

Removing the Side Cover

- 1. Remove the two screws securing the left side cover to the chassis.
- 2. Slide the left cover toward the rear of the chassis.
- 3. Lift the left cover from the chassis.
- 4. Remove the three screws securing the right side cover to the chassis.
- 5. Slide the right cover toward the rear of the chassis
- 6. Lift the right cover from the chassis.

Warning: Except for short periods of time, do not operate the system without the cover in place. The chassis cover must be in place to allow for proper airflow and to prevent overheating.

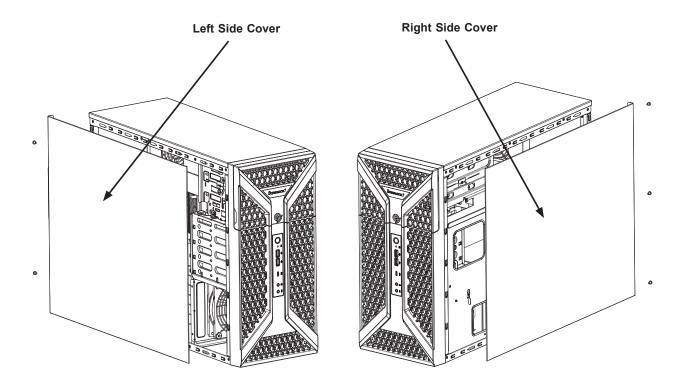


Figure 3-1. Removing the Side Cover

3.3 Motherboard Components

Processor and Heatsink Installation

Note: The heatsink is sold separately and not included as part of the system.

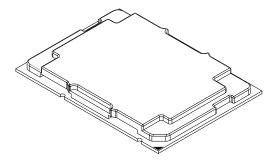
The processor (CPU) and processor carrier should be assembled together first to form the processor carrier assembly. This will be attached to the heatsink to form the processor heatsink module (PHM) before being installed into the CPU socket. Before installation, be sure to perform the following steps below:

- Please carefully follow the instructions below given to avoid ESD-related damages.
- Unplug the AC power cords from all power supplies after shutting down the system.
- Check that the plastic protective cover is on the CPU socket and none of the socket pins are bent. If they are, contact your retailer.
- When handling the processor, avoid touching or placing direct pressure on the LGA lands (gold contacts). Improper installation or socket misalignment can cause serious damage to the processor or CPU socket, which may require manufacturer repairs.
- Thermal grease is pre-applied on a new heatsink. No additional thermal grease is needed.
- Refer to the Supermicro website for updates on processor and memory support.
- All graphics in this manual are for illustrations only. Your components may look different.

ESD Precautions

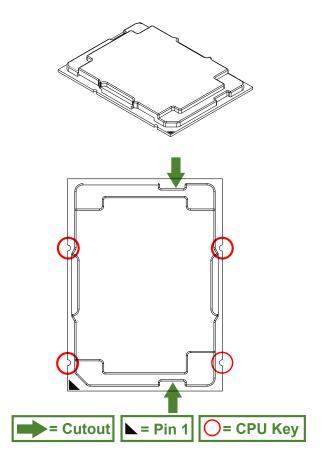
- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Handle the motherboard by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the motherboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure that your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the motherboard.
- Use only the correct type of onboard CMOS battery. Do not install the onboard battery upside down to avoid possible explosion.

The 3rd Gen Intel Xeon Scalable Processor



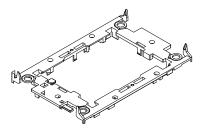
Processor Top View

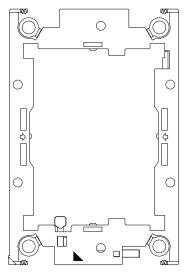
1. The 3rd Gen Intel Xeon Scalable Processor



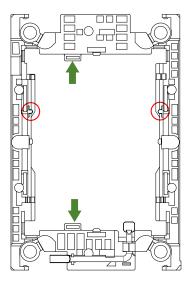
Processor Top View

2. The Processor Carrier



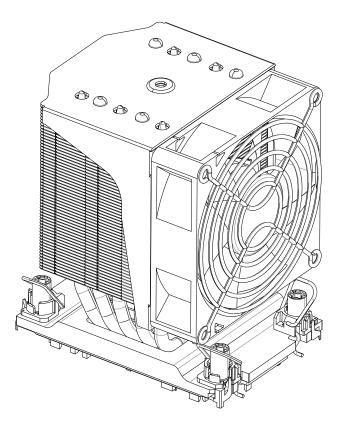


Carrier Top View



Carrier Bottom View

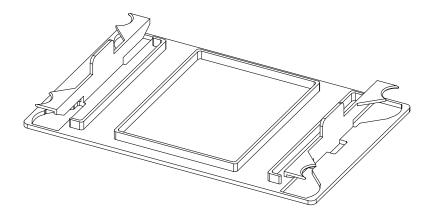
3. Heatsink



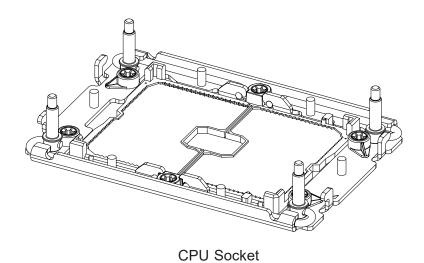
Note: The heatsink is sold separately and not included as part of the system. Exercise extreme care when handling the heatsink. Pay attention to the edges of heatsink fins which can be sharp! To avoid damaging the heatsink, please do not apply excessive force on the fins when handling the heatsink.

Overview of the CPU Socket

The CPU socket is protected by a plastic protective cover.



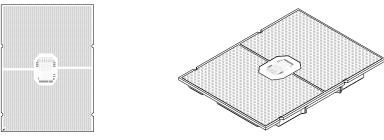
Plastic Protective Cover



Overview of the Processor Carrier Assembly

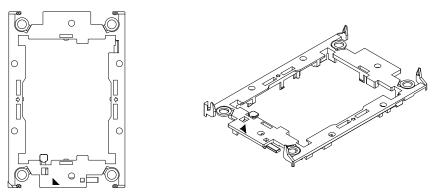
The processor carrier assembly contains a 3rd Gen Intel Xeon Scalable processor and a processor carrier. Carefully follow the instructions given in the installation section to place a processor into the carrier to create a processor carrier.

1. The 3rd Gen Intel Xeon Scalable Processor



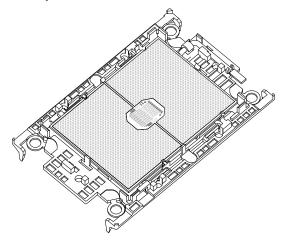
Intel Processor (Bottom View)

2. Processor Carrier



Intel Processor Carrier Top View)

3. Processor Carrier Assembly

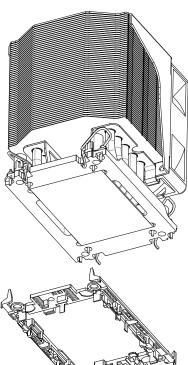


(with Processor Seated inside the Carrier)

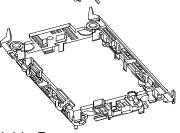
Overview of the Processor Heatsink Module

The Processor Heatsink Module (PHM) contains a heatsink, a processor carrier, and the 3rd Gen Intel Xeon Scalable Processor

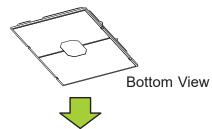
1. Heatsink



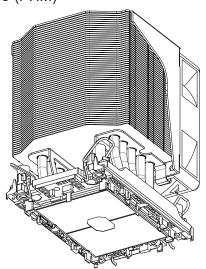
2. Processor Carrier



3. The 3rd Gen Intel Xeon Scalable Processor



4. Processor Heatsink Module (PHM)



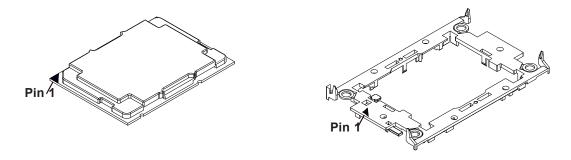
Creating the Processor Carrier Assembly

The processor carrier assembly contains a 3rd Gen Intel Xeon Scalable processor and a processor carrier.

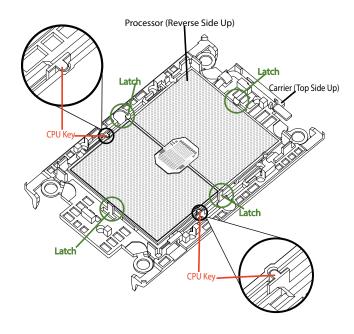
To create the processor carrier assembly, please follow the steps below:

Note: Before installation, be sure to follow the instructions given on page 31.

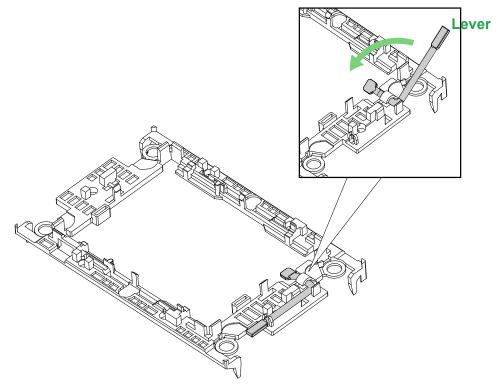
Hold the processor with the LGA lands (with Gold CPU contacts) facing down. Locate
the small, gold triangle at the corner of the processor and the corresponding hollowed
triangle on the processor carrier as shown in the graphics below. Please note that the
triangle indicates Pin 1 location.



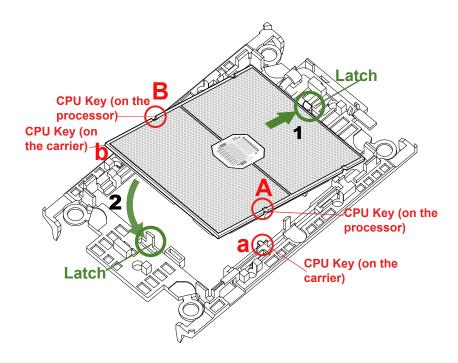
2. First, turn over the processor carrier and locate Pin 1 on the CPU and Pin 1 on the carrier. Then, turn the processor over with the processor reverse side (gold contacts) facing up and locate CPU keys on the processor. Finally, locate the CPU keys and four latches on the carrier as shown below.



1. Locate the lever on the CPU socket and press the lever down as shown below. Using



- 2. Using Pin 1 as a guide, carefully align the CPU keys (A & B) on the processor against the CPU keys on the carrier (a & b) as shown in the drawing below.
- 3. Once they are properly aligned, carefully place one end of the processor into the latch marked 1 on the carrier, and place the other end of processor into the latch marked 2

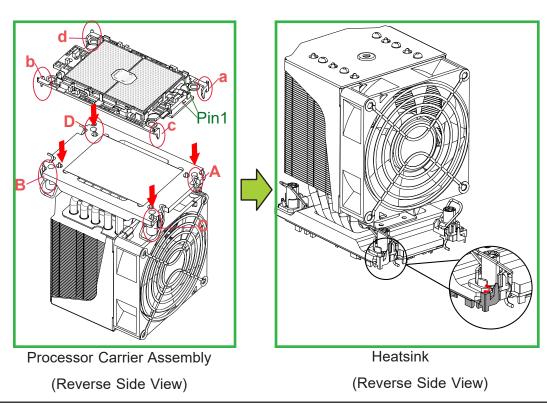


Creating the Processor Heatsink Module (PHM)

After creating the processor carrier assembly, please follow the instructions below to mount the processor carrier into the heatsink to form the processor heatsink module (PHM).

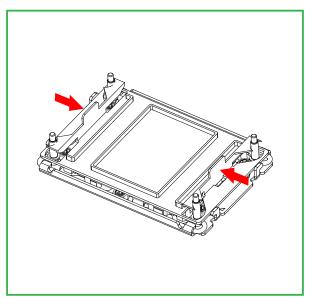
Note: If this is a new heatsink, the thermal grease has been pre-applied on the underside. Otherwise, apply the proper amount of thermal grease.

- 1. Turn the heatsink over with the thermal grease, which is on the reverse side of the heatsink, facing up. Pay attention to the two triangle cutouts (A, B) located at the diagonal corners of the heatsink as shown in the drawing below.
- 2. Hold the processor carrier assembly top side (with thermal grease) facing up, and locate the triangle on the CPU and the triangle on the carrier. (Triangle indicates Pin 1.)
- 3. Using Pin 1 as a guide, turn the processor carrier assembly over with the gold contacts facing up. Locate Pin 1 (A) on the processor and Pin 1 (a) on the processor carrier assembly "a".
- 4. Align the corner marked "a" on the processor carrier assembly against the triangle cutout "A" on the heatsink, and align the corners marked "b", "c", "d" on processor assembly against the corners marked "B", "C", "D" on the heatsinks
- 5. Once they are properly aligned, place the corner marked "a" on the processor carrier assembly into the corner of the heatsink marked "A". Repeat the same step to place the corners marked "b", "c", "d" on the processor carrier assembly into the corners of the heatsink marked "B", "C", "D" making sure that all plastic clips are properly attached to the heatsink.

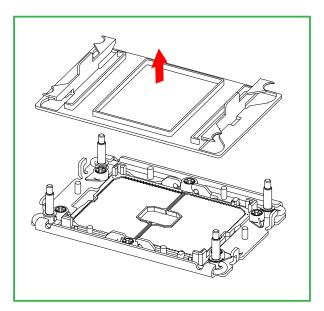


Preparing the CPU Socket for Installation

This motherboard comes with a plastic protective cover installed on the CPU socket. Remove it from the socket to install the Processor Heatsink Module (PHM). Gently pull up one corner of the plastic protective cover to remove it.



1. Press the tabs inward.

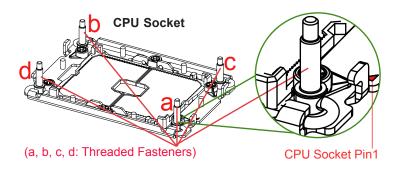


2. Pull up the protective cover from the socket.

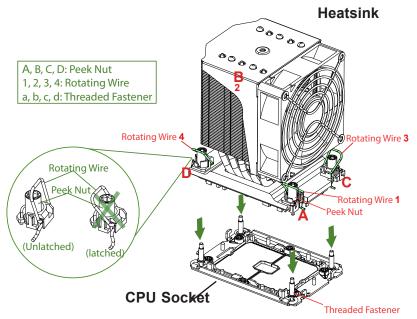
Preparing to Install the Processor Heatsink Module (PHM) into the CPU Socket

After assembling the Processor Heatsink Module (PHM), you are ready to install it into the CPU socket. To ensure the proper installation, please follow the procedures below:

1. Locate four threaded fasteners (a, b, c, d) on the CPU socket.



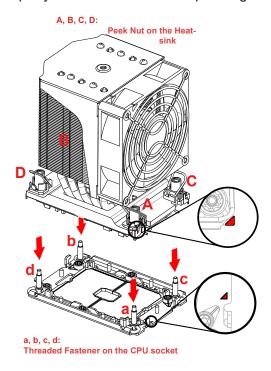
2. Locate four peek nuts (A, B. C. D) and four rotating wires (1, 2, 3, 4) on the heatsink as shown in the graphics below.



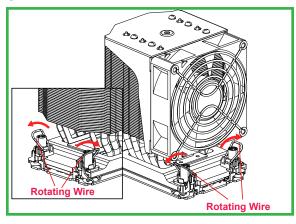
3. Check the rotating wires (1, 2, 3, 4) to make sure that they are at unlatched positions as shown in the drawing below before installing the PHM into the CPU socket.

Installing the Processor Heatsink Module (PHM)

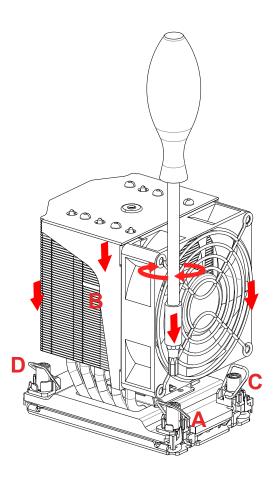
- 1. Align peek nut "A", which is next to the triangle (Pin 1) on the heatsink, against threaded fastener "a" on the CPU socket. Then align peek nuts "B", "C", "D" on the heatsink against threaded fasteners "b", "c", "d" on the CPU socket, making sure that all peek nuts on the heatsink are properly aligned with the correspondent threaded fasteners on the CPU socket.
- 2. Once they are aligned, gently place the heatsink on top the CPU socket, making sure that each peek nut is properly attached to its corresponding threaded fastener.



3. Press all four rotating wires outwards and make sure that the heatsink is securely latched unto the CPU socket.



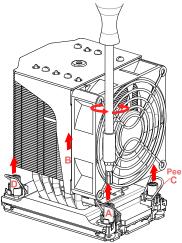
- 4. With a T30-bit screwdriver, tighten all peek nuts in the sequence of "A", "B", "C", and "D" with even pressure. To avoid damaging the processor or socket, do not use a force greater than 12 lbf-in when tightening the screws.
- 5. Examine all corners heatsink to ensure that the PHM is firmly attached to the CPU socket.



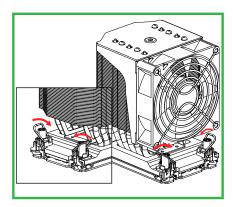
Removing the Processor Heatsink Module from the CPU Socket

Before removing the processor heatsink module (PHM) from the motherboard, unplug the AC power cord from all power supplies after shutting down the system. Then follow the steps below:

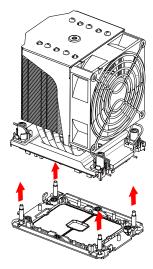
1. Use a T30-bit screwdriver to loosen the four peek nuts on the heatsink in the sequence of #A, #B, #C, and #D.



2. Once the peek nuts are loosened from the CPU socket, press the rotating wires inwards to unlatch the PHM from the socket as shown in the drawings below.



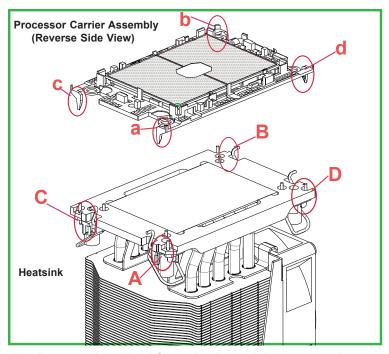
3. Gently lift the PHM upwards to remove it from the CPU socket.



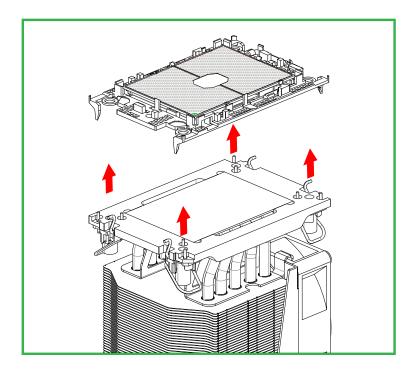
Removing the Carrier Assembly from the Processor Heatsink Module (PHM)

To remove the processor carrier assembly from the PHM, please follow the steps below:

1. Detach four plastic clips (marked a, b, c, d) on the processor carrier assembly from the four corners of heatsink (marked A, B, C, D) in the drawings below.



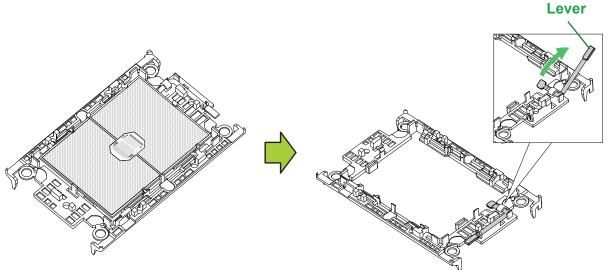
2. When all plastic clips are detached from the heatsink, remove the processor carrier assembly from the heatsink



Removing the Processor from the Processor Carrier Assembly

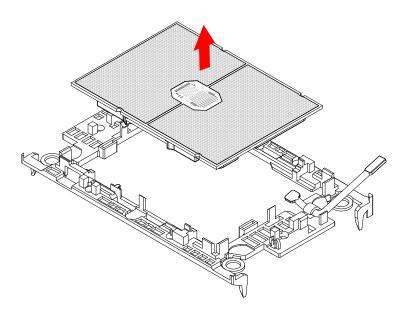
Once you have removed the processor carrier assembly from the PHM, you are ready to remove the processor from the processor carrier by following the steps below.

1. Unlock the lever from its locking position and push the lever upwards to disengage the processor from the processor carrier as shown in the right drawing below.



2. Once the processor is loosened from the carrier, carefully remove the processor from the processor carrier.

Note: To avoid damaging the processor and its pins, please handle the processor with care.



3.4 Memory

The X12DAi-N motherboard has 16 DIMM slots. It supports up to

- 4 TB (DDR4 only): 3DS LRDIMM/LRDIMM/3DS RDIMM/RDIMM DDR4 (288-pin) ECC memory with speeds of 3200/2933/2666 MHz.
- 4 TB (PMem + DDR4): Intel Optane PMem 200 Series with speeds of up to 3200 MHz.

Notes: PMem 200 Series are supported on 3rd Gen Intel Xeon Scalable Platinum, Gold and selected Silver processors. Memory speed support depends on the processors used in the system.

DDR4 Memory Support for the 3rd Gen Intel Xeon Scalable Processors						
	Ranks Per DIMM &	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); Slots Per Channel (SPC) and DIMMs Per Channel (DPC)		
Туре	Data Width			1DPC (1-DIMM Per Channel)	2DPC (2-DIMM Per Channel)	
		8Gb	16Gb	1.2 V	1.2 V	
	SRx8	8GB	16GB	3200		
DDIMM	SRx4	16GB	32GB			
RDIMM	DRx8	16GB	32GB		3200	
	DRx4	32GB	64GB		3200	
RDIMM 3Ds	(4R/8R) X4	2H- 64 GB 4H-128 GB	2H- 128 GB 4H-256 GB			
LRDIMM	QRx4	64GB	128GB	3200	3200	
LRDIMM - 3Ds	(4R/8R) X4	4H-128 GB	2H- 128 GB 4H-256 GB	3200	3200	

Ke	Key Parameters for DIMM Configurations		
Parameters	Possible Values		
Number of Channels	8		
Number of DIMMs per Channel	1DPC (1 DIMM Per Channel) or 2DPC (2 DIMMs Per Channel)		
DIMM Type	RDIMM (w/ECC), 3DS RDIMM, LRDIMM, 3DS LRDIMM		
DIMM Construction	non-3DS RDIMM Raw Cards: A/B (2Rx4), C (1Rx4), D (1Rx8), E (2Rx8) 3DS RDIMM Raw Cards: A/B (4Rx4) non-3DS LRDIMM Raw Cards: D/E (4Rx4) 3DS LRDIMM Raw Cards: A/B (8Rx4)		

DDR4 Memory Population Guideline

DDR4 Memory Population Guideline			
CPUs/DIMMs	Memory Population Sequence		
1 CPU & 1 DIMM	A1		
1 CPU & 2 DIMMs*	A1, E1		
1 CPU & 4 DIMMs*	A1, E1, C1, G1		
1 CPU & 6 DIMM	A1, E1, C1, G1, B1, F1		
1 CPU & 8 DIMMs*	A1, E1, C1, G1, B1, F1, D1, H1		
O CDUIS O O DIMMS*	CPU1: A1		
2 CPUs & 2 DIMMs*	CPU2: A1		
2 CPUs & 4 DIMMs*	CPU1: A1, E1		
Z CPUS & 4 DIIVIIVIS	CPU2: A1, E1		
2 CPUs & 6 DIMMs	CPU1: A1, E1, C1, G1		
Z OI OS Q O DIMINIS	CPU2: A1, E1		
2 CPUs & 8 DIMMs*	CPU1: A1, E1, C1, G1		
	CPU2: A1, E1, C1, G1		
2 CPUs & 10 DIMMs	CPU1: A1, E1, C1, G1, B1, F1		
	CPU2: A1, E1, C1, G1		
2 CPUs & 12 DIMMs*	CPU1: A1, E1, C1, G1, B1, F1		
	CPU2: A1, E1, C1, G1, B1, F1		
2 CPUs & 14 DIMMs	CPU1: A1, E1, C1, G1, B1, F1, D1, H1		
	CPU2: A1, E1, C1, G1, B1, F1		
2 CPUs & 16 DIMMs*	CPU1: A1, E1, C1, G1, B1, F1, D1, H1		
	CPU2: A1, E1, C1, G1, B1, F1, D1, H1		

^{*}recommended configurations shaded in orange and marked with an asterisk

Note: Memory DIMM capacities larger than 16GB are supported under certain conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization.

Intel Optane PMem 200 Series

Note: PMem 200 Series are supported on 3rd Gen Intel Xeon Scalable Platinum, Gold and selected Silver processors. PMem may only be supported under certain conditions, please contact Supermicro technical support for additional information.

	CPU1 PMem Population on 16-DIMM Motherboard									
DDR4 and PMem	Mode	AD Interleave	F1	E1	H1	G1	C1	D1	A1	B1
4 DDR4	AD	One - x4	PMem	DDR4	PMem	DDR4	DDR4	PMem	DDR4	PMem
4 PMem	MM	One - x4	DDR4	PMem	DDR4	PMem	PMem	DDR4	PMem	DDR4
			DDR4	DDR4	-	DDR4	DDR4	PMem	DDR4	DDR4
			-	DDR4	DDR4	DDR4	DDR4	DDR4	DDR4	PMem
			DDR4	DDR4	PMem	DDR4	DDR4	-	DDR4	DDR4
6 DDR4	AD	One - x1	PMem	DDR4	DDR4	DDR4	DDR4	DDR4	DDR4	-
1 PMem	AD	One - X1	DDR4	DDR4	DDR4	-	PMem	DDR4	DDR4	DDR4
			DDR4	-	DDR4	DDR4	DDR4	DDR4	PMem	DDR4
			DDR4	DDR4	DDR4	PMem	-	DDR4	DDR4	DDR4
			DDR4	PMem	DDR4	DDR4	DDR4	DDR4	-	DDR4

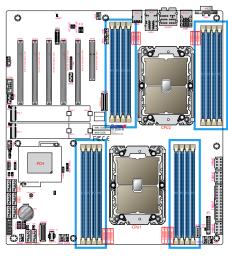
Validation Matrix (DDR4 DIMMS with PMem 200 Series)				
	Ranks Per DIMM	DIMM Capacity (GB)		
DIMM Type	& Data Width	DRAM Density		
	(Stack)	8Gb	16Gb	
	1Rx8	N/A	N/A	
RDIMM	1Rx4	16GB	32GB	
(up to 3200)	2Rx8	16GB	32GB	
	2Rx4	32GB	64GB	
RDIMM 3DS	4Rx4 (2H)	N/A	128GB	
(up to 3200)	8Rx4 (4H)	NA	256GB	
LRDIMM (up to 3200)	4Rx4	64GB	128GB	
LRDIMM 3DS	4Rx4 (2H)	N/A	N/A	
(up to 3200)	8Rx4 (4H)	N/A	256GB	

- Mode definitions: AD = App Direct Mode, MM = Memory Mode, AD+MM = Mixed Mode
- No mixing of PMem and NVDIMMs within the platform.
- For MM, NM/FM ratio is between 1:4 and 1:16. The capacity not used for FM can be used for AD. (NM = Near Memory; FM = Far Memory).
- Matrix targets configs for optimized PMem to DRAM cache ratio in MM and MM + AD modes.
- For each individual population, different PMem rearrangements among channels are permitted so long as the configuration doesn't break X12 DP Memory population rules.
- Ensure the same DDR4 DIMM type and capacity are used for each DDR4 + PMem population.
- If the system detects an unvalidated config, then the system issues a BIOS warning. The CLI functionality is limited in non POR configurations, and select commands will not be supported.

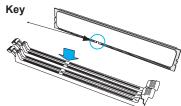
DIMM Installation

- Insert the desired number of DIMMs into the memory slots based on the recommended DDR4only population table on page 38 or the DDR4 and PMem table on page 39.
- 2. Push the release tabs outwards on both ends of the DIMM slot to unlock it.

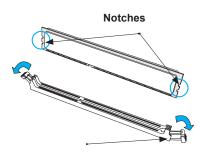




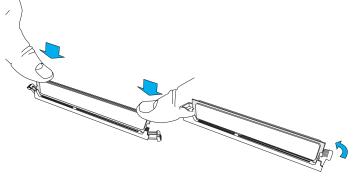
3. Align the key of the DIMM module with the receptive point on the memory slot.



4. Align the notches on both ends of the module against the receptive points on the ends of the slot.



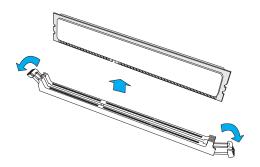
5. Push both ends of the module straight down into the slot until the module snaps into place.



6. Press the release tabs to the lock positions to secure the DIMM module into the slot.

DIMM Removal

Press both release tabs on the ends of the DIMM module to unlock it. Once the DIMM module is loosened, remove it from the memory slot.



Warning! Please do not use excessive force when pressing the release tabs on the ends of the DIMM socket to avoid causing any damage to the DIMM module or the DIMM socket. Please handle DIMM modules with care.

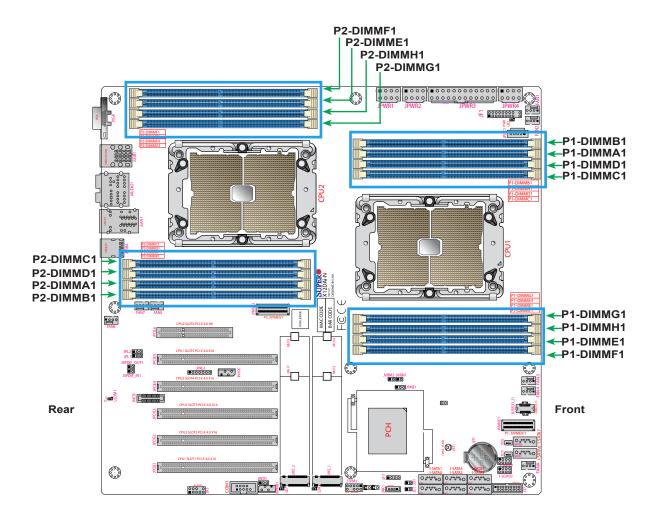


Figure 3-2. DIMM Slots

3.5 Expansion Card Installation

Installing an M.2 Solid State Drive

The X12DAi-N can accommodate two M.2 solid state drives (SSDs). Each M.2 socket supports NVMe PCle 4.0 x4 (32 Gb/s) SSD cards in the 2280 or 22110 form factors. The 22110 form factor is recommended because the appropriate standoff comes pre-installed on the motherboard.

Caution: Use industry-standard anti-static equipment, such as gloves or wrist strap, and follow precautions to avoid damage caused by ESD.

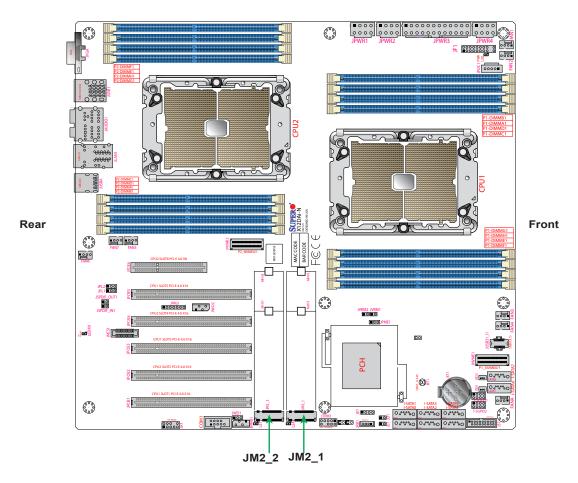


Figure 3-3. M.2 Locations

Note: JM2 2 cannot be used if a graphics card is installed in any of the PCle slots 1-5.

PCI Expansion Card Installation

After the motherboard has been installed, expansion cards may be installed.

Installing Expansion Cards

- 1. Begin by removing power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Locate the release tab on the top of the PCI slot bracket.
- 3. Gently apply pressure in the middle of the release tab to unlock the PCI slot bracket.
- 4. Pull the release tab upward.
- 5. Remove the screw holding the bracket in place and pull the bracket from the chassis.
- 6. Install your PCI card or other add-on card into the PCI slot bracket and motherboard. To do this, slide the PCI card (with "L" bracket) into the PCI slot and secure the card to the motherboard.
- 7. Push the PCI bracket release tab down until it locks into place with an audible "click".
- 8. Secure the PCI card with the screw previously removed from the chassis.
- 9. Repeat this process with each PCI card you want to install into the chassis.

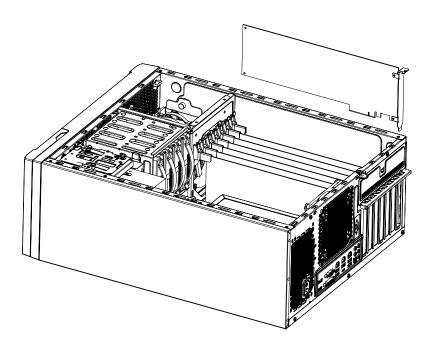


Figure 3-4. Installing Add-on Cards

3.6 Motherboard Battery

The motherboard uses non-volatile memory to retain system information when system power is removed. This memory is powered by a lithium battery residing on the motherboard.

Replacing the Battery

Begin by <u>removing power</u> from the system.

- 1. Push aside the small clamp that covers the edge of the battery. When the battery is released, lift it out of the holder.
- 2. To insert a new battery, slide one edge under the lip of the holder with the positive (+) side facing up. Then push the other side down until the clamp snaps over it.

Note: Handle used batteries carefully. Do not damage the battery in any way; a damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

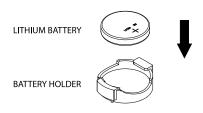


Figure 3-5. Installing the Onboard Battery

Warning: There is a danger of explosion if the onboard battery is installed upside down (which reverses its polarities). This battery must be replaced only with the same or an equivalent type recommended by the manufacturer (CR2032).

3.7 Storage Drives

The SYS-730A-I supports four internal 3.5" SATA drives installed in a rotating cage. Additional drives are supported by an optional mobile rack or an optional internal hard drive cage.

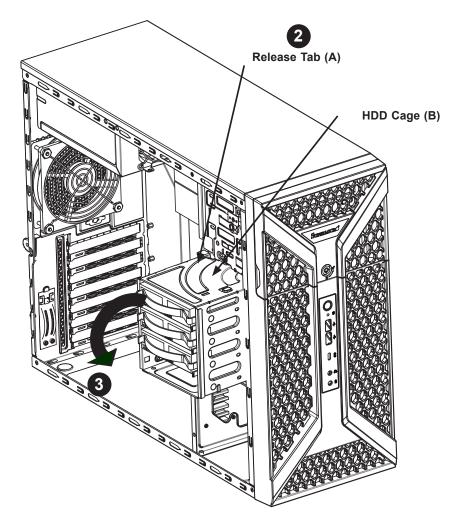


Figure 3-6. Rotating the Internal Hard Drive Cage

Rotating the Hard Drive Cage

- 1. Begin by removing power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Lift the release tab located at the top of the hard drive cage.
- 3. Rotate the hard drive cage 90 degrees so the drive carriers are facing outward.

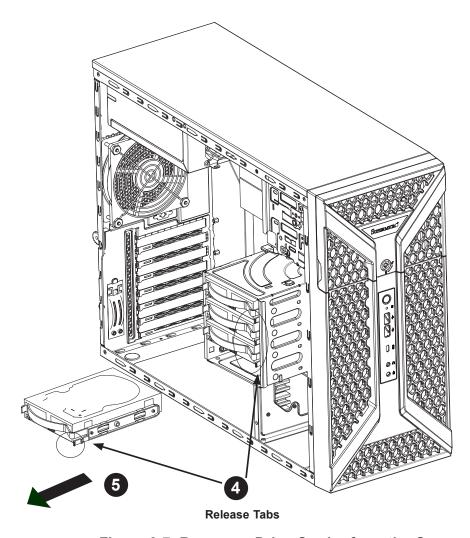


Figure 3-7. Remove a Drive Carrier from the Cage

Removing and Installing 3.5" Hard Drives

- 1. Begin by removing power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Rotate the hard drive cage outward.
- 3. Disconnect all of the cables from the hard drive.
- 4. Press the release tab on the side of the hard drive carrier.
- 5. Slide the hard drive carrier out of the cage.

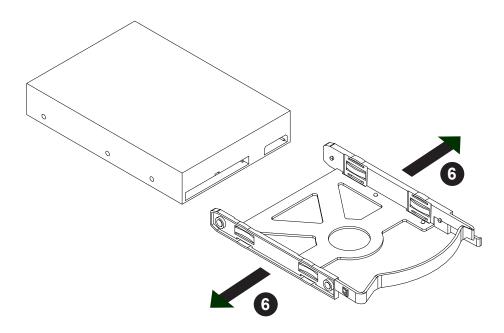


Figure 3-8. Remove a Drive Carrier from the Cage

- 6. If a hard drive is already present, pull the sides of the carrier and remove the drive from the carrier.
- 7. Insert a new drive into the carrier and push the sides of the carrier together.
- 8. Insert the carrier into the cage. Slide the carrier towards the back of the cage until it clicks into place.
- 9. Rotate the cage 90 degrees inward.
- 10. Connect the hard drive cables.
- 11. Plug the power cord back into the power module, replace the chassis cover and powerup the system.

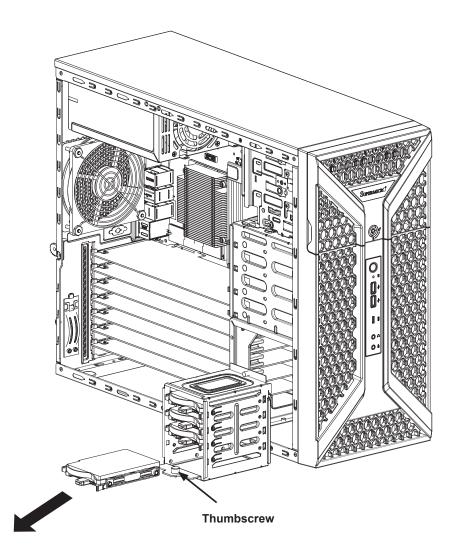


Figure 3-9. Removing/Installing a Hard Drive

Removing and Installing Optional HDD Cage

- 1. Begin by removing power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Loosen the thumbscrew securing the 2.5" hard drive cage to the chassis.
- 3. Disconnect all cables from the hard drive.
- 4. Slide the 2.5" hard drive cage out of the chassis.
- 5. If a hard drive is already present, remove it by carefully pulling the sides of the hard drive carrier outward.
- 6. Remove the hard drive from the hard drive carrier.

- 7. Insert the new hard drive into the hard drive carrier.
- 8. Insert the hard drive carrier into the hard drive cage, sliding it towards the back of the the hard drive cage until it clicks into a locked position.
- 9. Slide the 2.5" hard drive cage back into the chassis and tighten the thumb screw to secure the cage.
- 10. Connect the related cables to the hard drive.
- 11. Plug the power cord back into the power module, replace the chassis cover and powerup the system.

3.8 System Cooling

The cooling system for the SYS-730A-I includes a fan at the front and rear of the chassis.

Note: When using consumer grade GPUs, fan speed setting must be set to Heavy IO.

Fans

One 12-cm exhaust fan is mounted in the chassis rear below the power supply. One 12-cm fan is mounted at the chassis front.

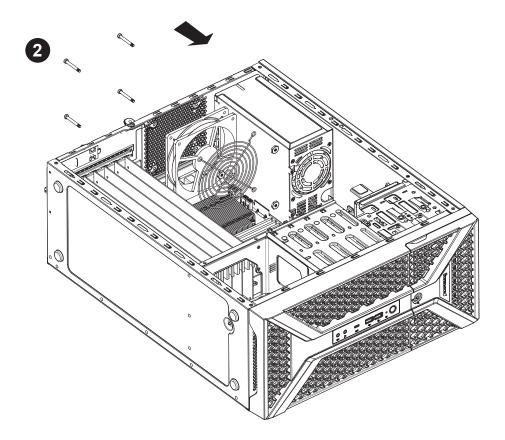


Figure 3-10. Installing the Rear Exhaust Fan

Replacing or Installing the Rear Fan

- 1. Begin by removing power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Insert the four rubber pins through mounting holes in the rear of the chassis and through the mounting holes in the rear fan.
- 3. Pull the rubber pins through the mounting holes of the fan to secure the fan to the chassis.
- 4. Connect the fan cable to the motherboard.

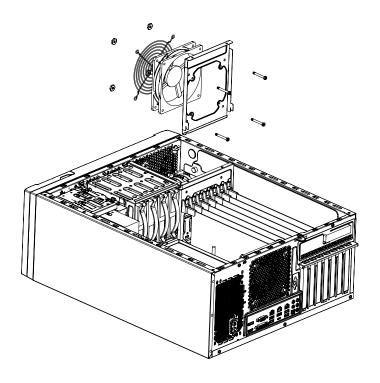


Figure 3-11. Installing the Front Fan

Replacing or Installing the Front Fan

- 1. Remove power from the system as described in Section 3.1 and remove the side cover as described in Section 3.2.
- 2. Insert the four rubber pins through the front fan bracket and into the mounting holes in the front fan.
- 3. Pull the rubber pins through the mounting holes of the system fan to secure the fan to the chassis.
- 4. Lower the fan into the chassis, aligning the holes at the top of the front fan bracket with the holes in the chassis.
- 5. Secure the fan to the chassis using the two screws provided.

3.9 Power Supply

The CSE-735D4-1K26B chassis includes a single 1200 Watt power supply. In the event that it becomes necessary to replace the power supply, follow the instructions below. Replacement units can be ordered directly from Supermicro.

Replacing the Power Supply

- 1. Remove power as described in Section 3.1 and remove the cover as described in Section 3.2.
- 2. Remove the screws securing the power supply to the chassis, which are located on the rear of the chassis. Set these screws aside for later use.
- 3. Disconnect the power supply from the motherboard connections.
- 4. Gently lift the power supply out of the chassis.
- 5. Replace the failed power supply with an identical power supply model.
- 6. Secure the new power supply using the screws previously set aside.
- 7. Plug the AC power cord back into the module and power-up the system.

Note: BMC interface will detect power supply status when the system is powered on, but the power supply will not support the standby mode for PMBus. This means when the system is turned on about a minute after plugging in the AC, the BMC will not be able to access the power supply information.

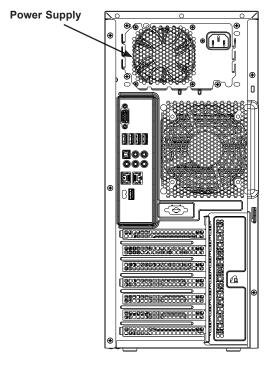


Figure 3-12. Power Supply Location

Chapter 4

Motherboard Connections

This section describes the connections on the motherboard and provides pinout definitions. Note that depending on how the system is configured, not all connections are required. The LEDs on the motherboard are also described here. A motherboard layout indicating component locations may be found in Chapter 1. More detail can be found in the Motherboard Manual. Please review the Safety Precautions in Appendix A before installing or removing components.

4.1 Power Connections

ATX Power Supply Connector

The 24-pin power supply connector (JPWR3) meets the ATX SSI EPS 12 V specification. You must also connect the 8-pin (JPWR1/JPWR2/JPWR4) processor power connector to the power supply. Refer to the next page for more information on JPWR1/JPWR2/JPWR4.

ATX Power 24-pin Connector Pin Definitions				
Pin#	Definition	Pin#	Definition	
13	+3.3V	1	+3.3V	
14	-12V	2	+3.3V	
15	Ground	3	Ground	
16	PS_ON	4	+5V	
17	Ground	5	Ground	
18	Ground	6	+5V	
19	Ground	7	Ground	
20	Res (NC)	8	PWR_OK	
21	+5V	9	5VSB	
22	+5V	10	+12V	
23	+5V	11	+12V	
24	Ground	12	+3.3V	

8-Pin Power Connector

JPWR1, JPWR2 and JPWR4 is an 8-pin 12 V DC power input for the CPU that must be connected to the power supply. Refer to the table below for pin definitions.

8-pin Power Pin Definitions				
Pin#	Definition			
1 - 4	Ground			
5 - 8	5 - 8 P12V (12V Power)			

Required Connection

4.2 Headers and Connectors

Fan Headers

There are eight 4-pin fan headers (FAN1 ~ FAN7, FANA) on the motherboard. All these 4-pin fan headers are backwards compatible with the traditional 3-pin fans. However, fan speed control is available for 4-pin fans only by Thermal Management via the BMC interface. Refer to the table below for pin definitions.

Fan Header Pin Definitions		
Pin# Definition		
1	Ground (Black)	
2	2.5A/+12V (Red)	
3	3 Tachometer	
4	PWM_Control	

SGPIO Headers

There are three Serial Link General Purpose Input/Output (I-SGPIO1 and I-SGPIO2) headers located on the motherboard. I-SGPIO is for SATA use. Refer to the tables below for pin definitions.

SGPIO Header Pin Definitions				
Pin#	Definition	Pin#	Definition	
1	NC	2	NC	
3	Ground	4	Data	
5	Load	6	Ground	
7	Clock	8	NC	

NC = No Connection

Disk-On-Module Power Connector

Two power connectors for SATA DOM (Disk-On-Module) devices are located at JSD1 and JSD2. Connect appropriate cables here to provide power support for your SATA DOM devices.

DOM Power Pin Definitions		
Pin#	Definition	
1	5V	
2	Ground	
3	Ground	

TPM/Port 80 Header

A Trusted Platform Module (TPM)/Port 80 header is located at JTPM1 to provide TPM support and Port 80 connection. Use this header to enhance system performance and data security. Refer to the table below for pin definitions. Please go to the following link for more information on the TPM: http://www.supermicro.com/manuals/other/TPM.pdf.

Trusted Platform Module Header Pin Definitions				
Pin#	Pin# Definition Pin# Definition			
1	+3.3V	2	SPI_CS#	
3	RESET#	4	SPI_MISO	
5	SPI_CLK	6	GND	
7	SPI_MOSI	8	NC	
9	+3.3V Stdby	10	SPI_IRQ#	

Power SMB (I²C) Header

The Power System Management Bus (I²C) connector (JPI2C1) monitors the power supply, fan, and system temperatures. Refer to the table below for pin definitions.

Power SMB Header Pin Definitions		
Pin# Definition		
1	Clock	
2	Data	
3	PMBUS_Alert	
4	Ground	
5	+3.3V	

4-pin BMC External I²C Header

A System Management Bus header for BMC is located at JIPMB1. Connect the appropriate cable here to use the IPMB I²C connection on your system. Refer to the table below for pin definitions.

External I ² C Header Pin Definitions		
Pin# Definition		
1	Data	
2	Ground	
3	Clock	
4	No Connection	

NVMe SMBus Headers

NVMe SMBus (I²C) headers (JNVI2C), used for PCIe SMBus clock and data connections, provide hot-plug support via a dedicated SMBus interface. This feature is only available for a Supermicro complete system with an SMCI-proprietary NVMe add-on card and cable installed. See the table below for pin definitions.

NVMe SMBus Header Pin Definitions		
Pin#	Definition	
1	Data	
2	Ground	
3	3 Clock	
4	VCCIO	

NVMe Connectors

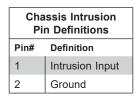
Use the two NVMe connectors (JNVME1 and JNVME2) to attach high-speed PCIe storage devices.

Note: When installing an NVMe device on a motherboard, please be sure to connect the first NVMe port first (JNVME1) for your system to work properly.

Chassis Intrusion

A Chassis Intrusion header is located at JL1 on the motherboard. Attach the appropriate cable from the chassis to inform you of a chassis intrusion when the chassis is opened. Refer to the table below for pin definitions.

Note: Chassis intrusion is not supported on SYS-730A-I.



Speaker Header (Optional for an External Speaker/Buzzer)

A speaker header, located at JD1, can be used in conjunction with an external speaker (optional). Use an appropriate cable to connect this header to an external speaker or buzzer for support of BIOS beep codes and system alarms.

SATA Ports

Six SATA 3.0 ports (I-SATA0/1/2/3/4/5) are located on the X12DAi-N motherboard supported by the C621A chipset. These SATA ports support RAID 0, 1, 5, and 10. In addition, there are also two SATA ports (I-SATA6, I-SATA7) that include SATA DOM power. SATA ports provide serial-link signal connections, which are faster than the connections of Parallel ATA.

Note: For more information on the SATA HostRAID configuration, please refer to the Intel SATA HostRAID user's guide posted on our website at http://www.supermicro.com.

M.2 Slot

The X12DAi-N motherboard has two M.2 slots (JM2_1 and JM2_2). M.2 allows for a variety of card sizes, increased functionality, and spatial efficiency. The M.2 socket on the motherboard supports PCIe 4.0 x4 (32 Gb/s) SSD cards in the 2280 and 22110 form factors.

Note: JM2_2 cannot be used if a graphics card is installed in any of the PCle slots 1-5.

VROC Intel RAID Key Header

The JRK1 header allows the user to enable RAID functions for NVMe connections. Refer to the table below for pin definitions.

Intel RAID Key Header Pin Definitions		
Pin#	Defintion	
1	GND	
2	PU 3.3V Stdby	
3	GND	
4	PCH RAID KEY	

VROC Intel RAID Key Header

The JRK1 header allows the user to enable RAID functions for NVMe connections. Refer to the table below for pin definitions.

Intel RAID Key Header Pin Definitions		
Pin# Defintion		
1	GND	
2	PU 3.3V Stdby	
3	GND	
4	PCH RAID KEY	

NC = No Connection

Control Panel

JF1 contains header pins for various buttons and indicators that are normally located on a control panel at the front of the chassis. These connectors are designed specifically for use with Supermicro chassis. See the figure below for the descriptions of the front control panel buttons and LED indicators.

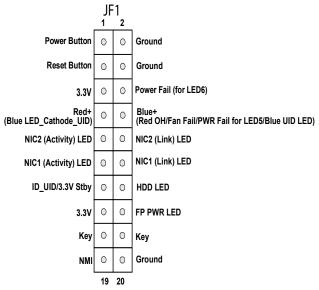


Figure 4-1. JF1 Control Panel Pins

Front Control Panel (JF1) LED Indicators							
Event	Power (LED1)	HDD (LED2)	LAN (LED3/4)	UID (LED5)	Information (LED5)	Power Fail (LED6)	SYS-730A-I Support
Power On	Solid On						Supported
HDD Activity		Blinking					Supported
NIC Activity			Blinking				Not supported
Overheat					Solid On		Not supported
Fan Fail					Blinking at 1 Hz		Not supported
Power Fail					Blinking at 1/4 Hz	Solid On	Not supported
Local UID On				Solid On			Not supported
Remote UID On				Blinking 1 Hz			Not supported
Checking	BMC/BIOS Blinking at 4 Hz						Not supported
Recovering/Updating	BMC Blinking at 4 Hz BMC Two Blinks at 4 Hz, 1 Pause at 2 Hz (on-on-off-off)			BIOS/BMC Blinking at 10 Hz			Not supported
Flash Not Detected or Golden Image Check Failed	BMC/BIOS Blinking at 1 Hz						Not supported
CPLD Recovery Mode				Blinking at 10 Hz (MB UID LED)	Blinking at 10 Hz (FP Red LED)		Not supported

Note: JF1 pins 3-13 and 15-20 are not supported by the SYS-730A-I front control panel.

Power On & BMC/BIOS Status LED Button

The Power On and BMC/BIOS Status LED button is located on pins 1 and 2 of JF1. Momentarily contacting both pins will power on/off the system or display BMC/BIOS status. Refer to the tables below for more information.

Power	Power Button & BIOS/BMC Status LED Indicator Pin Definitions (JF1)		
Pin#	Definition		
1	Signal		
2	Ground		

Power Button Pin Definitions (Pin 1 & Pin 2 of JF1)				
Status Event				
Green: solid on	System power on			
BMC/BIOS blinking green at 4 Hz	BMC/BIOS checking			
BIOS blinking green at 4 Hz	BIOS recovery/update in progress			
BMC blinking red twice at 4 Hz and 1 pause at 2 Hz (on-on-off-off)	BMC recovery/update in progress			
BMC/BIOS blinking green at 1 Hz	Flash not detected or golden image checking failure			

4.3 Input/Output Ports

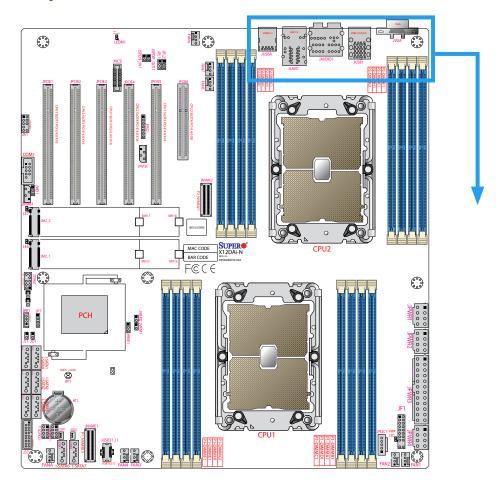
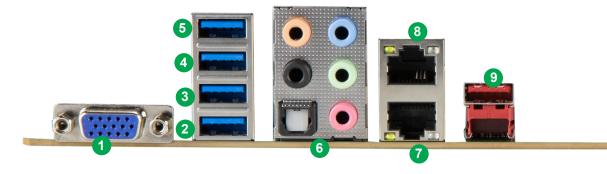


Figure 4-2. I/O Port Locations and Definitions



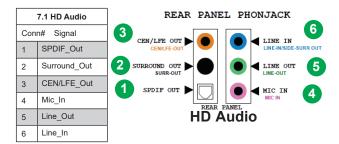
	Rear I/O Ports				
# Description # Description		Description			
1	VGA Port	6	7.1 HD Audio		
2	USB0 (USB 3.2 Gen 1)	7	LAN1		
3	USB1 (USB 3.2 Gen 1)	8	LAN2		
4	USB2 (USB 3.2 Gen 1)	9	USB4 (USB 3.2 Gen 2) type A		
5	USB3 (USB 3.2 Gen 1)				

VGA Port

A video (VGA) port is located next to LAN2 on the I/O back panel.

7.1 HD (High-Definition) Audio

This motherboard features a 7.1 Channel High-Definition Audio (HDA) codec that provides 8 DAC channels. The HD audio supports multiple-streaming 7.1 sound playback through the front_panel stereo output via the subwoofer speakers. Download the appropriate software from our website to enable this function.



Front Accessible Audio Header

A 10-pin audio header, located at JA1, allows you to use the onboard sound for audio playback. Connect an audio cable to the audio header to use this feature. See the layout below for onboard audio header.

COM Ports

COM connections (COM1) are located on the motherboard. COM1 is located next to PCIe Slot 1 (JPCIE1).

COM Port Pin Definitions			
Pin#	Definition	Pin#	Definition
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	Ground	10	N/A

Ethernet Ports

Two Gigabit Ethernet ports (LAN1, LAN2) are located on the I/O back panel. These Ethernet ports support 1 GbE LAN connections on the X12DAi-N. All of these ports accept RJ45 cables. Please refer to the LED Indicator section for LAN LED information.

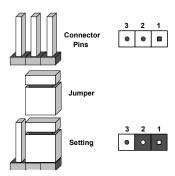
	LAN Port Pin Definition				
Pin#	Definition	Pin#	Definition		
1	TD0-	11	P3V3_Dual		
2	TD0+	12	Act LED (Yellow)		
3	TD1-	13	Link 1000 (Amber)		
4	TD1+	14	Link 100 LED (Green)		
5	TD2-	15	GND		
6	TD2+	16	GND		
7	TD3-	17	GND		
8	TD3+	18	GND		
9	COMMCT				
10	GND				

4.4 Jumpers

Explanation of Jumpers

To modify the operation of the motherboard, jumpers are used to choose between optional settings. Jumpers create shorts between two pins to change the function associated with it. Pin 1 is identified with a square solder pad on the printed circuit board. See the motherboard layout page for jumper locations.

Note: On a two-pin jumper, "Closed" means the jumper is on both pins and "Open" indicates the jumper is either on only one pin or has been completely removed.



CMOS Clear

JBT1 is used to clear CMOS, which will also clear any passwords. Instead of pins, this jumper consists of contact pads to prevent accidentally clearing the contents of CMOS.

To Clear CMOS

- 1. First power down the system and unplug the power cord(s).
- 2. Remove the cover of the chassis to access the motherboard.
- 3. Remove the onboard battery from the motherboard.
- 4. Short the CMOS pads with a metal object such as a small screwdriver for at least four seconds.
- 5. Remove the screwdriver (or shorting device).
- 6. Re-install the motherboard battery.
- 7. Replace the cover, reconnect the power cord(s), and power on the system.

Note: Clearing CMOS will also clear all passwords.

Do not use the PW ON connector to clear CMOS.

Watchdog

Watchdog (JWD1) is a system monitor that can reboot the system when a software application hangs. Close pins 1-2 to reset the system if an application hangs. Close pins 2-3 to generate a non-maskable interrupt (NMI) signal for the application that hangs. Refer to the table below for jumper settings. The Watchdog must also be enabled in the BIOS.

Watchdog Jumper Settings		
Jumper Setting Definition		
Pins 1-2	Reset	
Pins 2-3	NMI	
Open Disabled		

Management Engine (ME) Recovery

Use jumper JPME1 to select ME Firmware Recovery mode, which will limit resource allocation for essential system operation only in order to maintain normal power operation and management. In the single operation mode, online upgrade will be available via Recovery mode. See the table below for jumper settings.

Manufacturer Mode Jumper Settings		
Jumper Setting	Definition	
Pins 1-2	Normal	
Pins 2-3 ME Recovery		

4.5 LED Indicators

LAN LEDs

Two LAN ports (LAN 1 and LAN 2) are located on the I/O back panel of the motherboard. Each Ethernet LAN port has two LEDs. The solid green LED indicates activity, while the other LED may be amber or off to indicate the speed of the connection. Refer to the tables below for more information.

LAN Activity LED				
Color	Status	Definition		
Green	Flashing	Active		

LAN Link LED		
LED Color	Definition	
Yellow/Amber	1Gbps	

M.2 LED

Two M.2 LEDs are located at LE4 and LE7 on the motherboard. When the LED is blinking, M.2 functions normally. Refer to the table below for more information.

M.2 LED State		
LED Color	Definition	
Green: Blinking	Device Working	

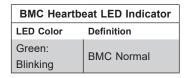
Onboard Power LED

The Onboard Power LED is located at PWRLED on the motherboard. When this LED is on, the system is on. Be sure to turn off the system and unplug the power cord before removing or installing components. Refer to the table below for more information.

Onboard Power LED Indicator		
LED Color	Definition	
	System Off	
Off	(power cable not	
	connected)	
Green	System On	

BMC Heartbeat LED

A BMC Heartbeat LED is located at LEDM1 on the motherboard. When LEDM1 is blinking, the BMC is functioning normally. Refer to the table below for more information.



Chapter 5

Software

After the hardware has been installed, you can install the Operating System (OS), configure RAID settings and install the drivers.

5.1 Microsoft Windows OS Installation

If you will be using RAID, you must configure RAID settings before installing the Windows OS and the RAID driver. Refer to the RAID Configuration User Guides posted on our website at www.supermicro.com/support/manuals.

Installing the OS

- 1. Create a method to access the MS Windows installation ISO file. That might be a USB flash or media drive.
- 2. Boot from a bootable device with Windows OS installation. You can see a bootable device list by pressing **F11** during the system startup.

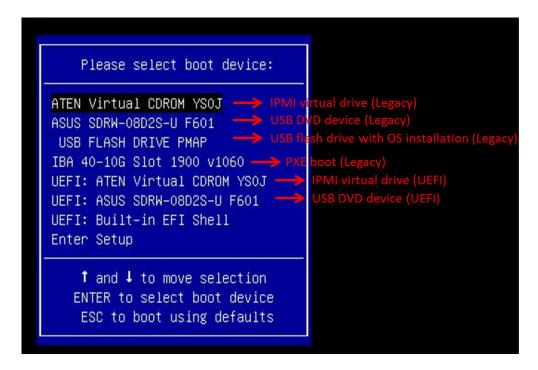


Figure 5-1. Select Boot Device

3. During Windows Setup, continue to the dialog where you select the drives on which to install Windows. If the disk you want to use is not listed, click on "Load driver" link at the bottom left corner.

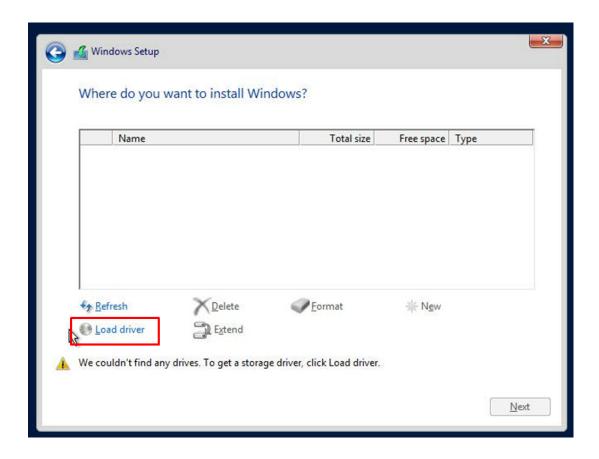


Figure 5-2. Load Driver Link

To load the driver, browse the USB flash drive for the proper driver files.

- For RAID, choose the SATA/sSATA RAID driver indicated then choose the storage drive on which you want to install it.
- For non-RAID, choose the SATA/sSATA AHCI driver indicated then choose the storage drive on which you want to install it.
- 4. Once all devices are specified, continue with the installation.
- 5. After the Windows OS installation has completed, the system will automatically reboot multiple times.

5.2 Driver Installation

The Supermicro website contains drivers and utilities for your system at https://www.supermicro.com/wdl/driver. Some of these must be installed, such as the chipset driver.

After accessing the website, go into the CDR_Images (in the parent directory of the above link) and locate the ISO file for your motherboard. Download this file to a USB flash or media drive. (You may also use a utility to extract the ISO file if preferred.)

Another option is to go to the Supermicro website at http://www.supermicro.com/products/. Find the product page for your motherboard, and "Download the Latest Drivers and Utilities". Insert the flash drive or disk and the screenshot shown below should appear.

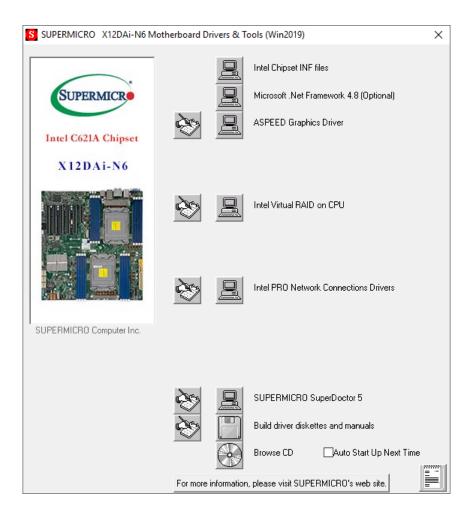


Figure 5-3. Driver & Tool Installation Screen

Note: Click the icons showing a hand writing on paper to view the readme files for each item. Click the computer icons to the right of these items to install each item (from top to the bottom) one at a time. **After installing each item, you must re-boot the system before moving on to the next item on the list.** The bottom icon with a CD on it allows you to view the entire contents.

5.3 SuperDoctor® 5

The Supermicro SuperDoctor 5 is a program that functions in a command-line or web-based interface for Windows and Linux operating systems. The program monitors such system health information as CPU temperature, system voltages, system power consumption, fan speed, and provides alerts via email or Simple Network Management Protocol (SNMP).

SuperDoctor 5 comes in local and remote management versions and can be used with Nagios to maximize your system monitoring needs. With SuperDoctor 5 Management Server (SSM Server), you can remotely control power on/off and reset chassis intrusion for multiple systems with SuperDoctor 5 or BMC. SuperDoctor 5 Management Server monitors HTTP, FTP, and SMTP services to optimize the efficiency of your operation.

SuperDoctor® Manual and Resources

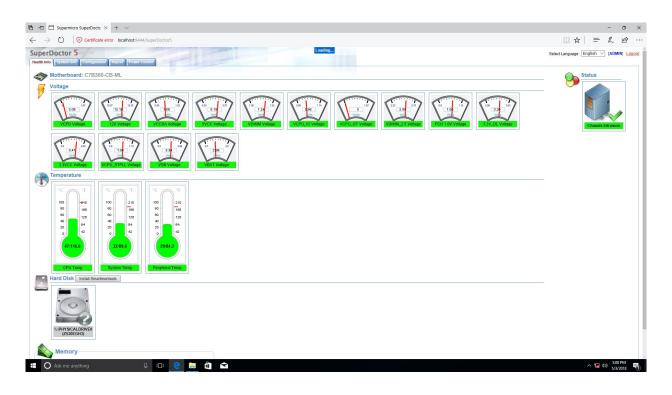


Figure 5-4. SuperDoctor 5 Interface Display Screen (Health Information)

5.4 BMC

The motherboard provides remote access, monitoring and management through the baseboard management controller (BMC) and other management controllers distributed among different system modules. There are several BIOS settings that are related to BMC. For general documentation and information on BMC, visit our website at:

www.supermicro.com/en/solutions/management-software/bmc-resources

BMC ADMIN User Password

For security, each system is assigned a unique default BMC password for the ADMIN user. This can be found on a sticker on the chassis and a sticker on the motherboard. The sticker also displays the BMC MAC address.



Figure 5-5. BMC Password Label

See Chapter 1 for the label location.

Chapter 6

Optional Components

This chapter describes optional system components.

6.1 Optional Parts List

Optional Parts List				
Feature	Part Number			
Mobile Rack	CSE-M14TQC/CSE-M28SACB			
2.5" to 3.5" SSD/HDD adapter tray	MCP-220-73102-0N			
2.5" HDD cage (4x Internal 2.5" HDD)	MCP-220-73201-0N			
5.25" HH 24X DVD-RW SATA DRIVE PBF	DVM-LITE-DVDRW24-HBT1			
4U Active CPU Heat Sink	SNK-P0080AP4			
NVMe cable (one cable supports two U.2 NVMe SSDs)	CBL-SAST-0953			

6.2 Additional Storage

A mobile rack can be installed in the chassis' 5.25" bay to support hot-swappable drives. An additional internal 2.5" hard drive cage can be installed beneath the rotating drive cage. Both the mobile rack and the hard drive cage require additional hardware or cables.

6.3 TPM Security Module

SPI capable TPM 2.0 with Infineon 9670 controller, vertical form factor

The JTPM1 header is used to connect a Trusted Platform Module (TPM). A TPM is a security device that supports encryption and authentication in hard drives. It enables the motherboard to deny access if the TPM associated with the hard drive is not installed in the system.

Details and installation procedures are at:

http://www.supermicro.com/manuals/other/TPM.pdf.

AOM-TPM-9670V

Chapter 7

Troubleshooting and Support

7.1 Information Resources

Website

A great deal of information is available on the Supermicro website, supermicro.com.



Figure 7-1. Supermicro Website

- Specifications for servers and other hardware are available by clicking on Products.
- The **Support** option offers downloads (manuals, BIOS/BMC, drivers, etc.), FAQs, RMA, warranty, and other service extensions.

Direct Links for the SYS-730A-I System

SYS-730A-I specifications page

X12DAi-N6 <u>motherboard page</u> for links to the Quick Reference Guide, User Manual, validated storage drives, etc.

Direct Links for General Support and Information

Frequently Asked Questions

Add-on card descriptions

TPM User Guide

General Memory Configuration Guide: X12

BMC User Guide

SuperDoctor5 Large Deployment Guide

For validated memory, use our Product Resources page

Direct Links (continued)

<u>Product Matrices</u> page for links to tables summarizing specs for systems, motherboards, power supplies, riser cards, add-on cards, etc.

Security Center for recent security notices

Supermicro Phone and Addresses

7.2 BMC Interface

The system supports the Baseboard Management Controller (BMC) Interface. BMC is used to provide remote access, monitoring and management. There are several BIOS settings that are related to BMC.

For general documentation and information on BMC, please visit our website at: https://www.supermicro.com/manuals/other/BMC Users Guide X12 H12.pdf.

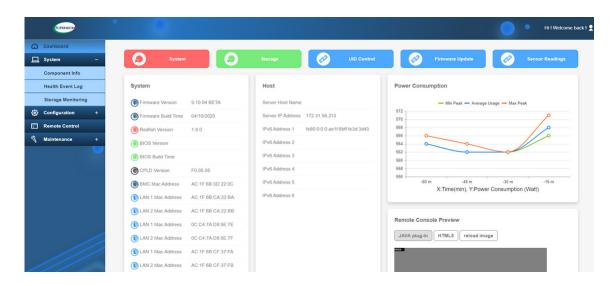


Figure 7-2. BMC Dashboard

7.3 Troubleshooting Procedures

Use the following procedures to troubleshoot your system. If you have followed all of the procedures below and still need assistance, refer to the <u>Technical Support Procedures</u> or <u>Returning Merchandise for Service</u> section(s) in this chapter. <u>Power down</u> the system before changing any non hot-swap hardware components.

No Power

- 1. Remove power from the system.
- 2. Remove the system from the rack, if necessary, and place on a stable surface.

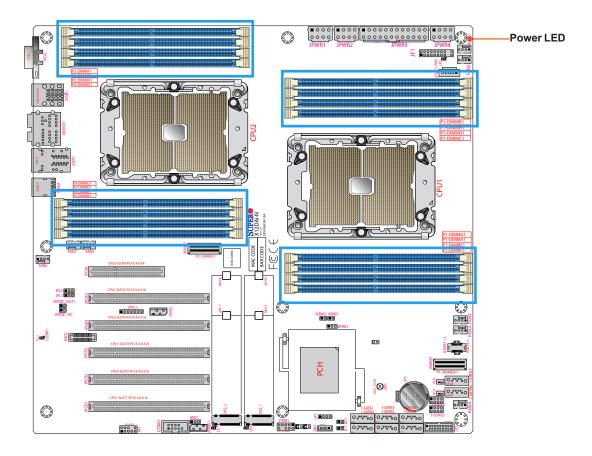


Figure 7-3. Location of the MB Power LED

- 3. Remove the tower side cover.
- 4. Move aside any other cables obstructing the view of the power LED.
- 5. Reconnect the power cables and power up the system.

- 6. As you try to power up the system, note any beep codes. Refer to the next section for details on beep codes.
- 7. Check that the power LED on the motherboard is on.
- 8. Make sure that the power connector is connected to your power supply.
- 9. Make sure that no short circuits exist between the motherboard and chassis.
- 10. Disconnect all cables from the motherboard, including those for the keyboard and mouse.
- 11. Remove all add-on cards.
- 12. Install a CPU, a heatsink, connect the internal speaker (if applicable), and the power LED to the motherboard. Make sure that the heatsink is fully seated.
- 13. Use the correct type of onboard CMOS battery as recommended by the manufacturer. Check to verify that it still supplies ~3VDC. If it does not, replace it with a new one. **Warning**: To avoid possible explosion, do not install the battery upside down.
- 14. Verify that all jumpers are set to their default positions.
- 15. Check that the power supplies' input voltage operate at 100-120V or 180-240V.
- 16. Turn the power switch on and off to test the system

No Video

- 1. If the power is on but you have no video, remove all the add-on cards and cables.
- 2. As you try to power up the system, note any beep codes. Refer to the next section for details on beep codes.

System Boot Failure

If the system does not display POST (Power-On-Self-Test) or does not respond after the power is turned on, check the following:

Turn on the system with only one DIMM module installed. If the system boots, check for bad DIMM modules or slots by following the Memory Errors Troubleshooting procedure below.

Memory Errors

- 1. Make sure that the DIMM modules are properly and fully installed.
- 2. Confirm that you are using the correct memory. Also, it is recommended that you use the same memory type and speed for all DIMMs in the system. See <u>Section 3.4</u> for memory details.
- Check for bad DIMM modules or slots by swapping modules between slots and noting the results.
- 4. Check the power supply voltage 115V/230V switch.

Losing the System's Setup Configuration

- 1. Make sure that you are using a high quality power supply. A poor quality power supply may cause the system to lose the CMOS setup information. .
- 2. The battery on your motherboard may be old. Check to verify that it still supplies ~3VDC. If it does not, replace it with a new one.
- 3. If the above steps do not fix the setup configuration problem, contact your vendor for repairs.

When the System Becomes Unstable

If the system becomes unstable during or after OS installation, check the following:

- 1. CPU/BIOS support: Make sure that your CPU is supported and that you have the latest BIOS installed in your system.
- 2. Memory support: Make sure that the memory modules are supported by testing the modules using memtest86 or a similar utility.
 - **Note**: Refer to the product page on our website at http://www.supermicro.com for memory and CPU support and updates.
- 3. HDD support: Make sure that all hard disk drives (HDDs) work properly. Replace the bad HDDs with good ones.
- 4. System cooling: Check the system cooling to make sure that all heatsink fans and CPU/ system fans, etc., work properly. Check the hardware monitoring settings in the BMC to make sure that the CPU and system temperatures are within the normal range. Also check the front panel Overheat LED and make sure that it is not on.

- 5. Adequate power supply: Make sure that the power supply provides adequate power to the system. Make sure that all power connectors are connected. Please refer to our website for more information on the minimum power requirements.
- 6. Proper software support: Make sure that the correct drivers are used.

If the system becomes unstable before or during OS installation, check the following:

- 1. Source of installation: Make sure that the devices used for installation are working properly, including boot devices such as CD.
- 2. Cable connection: Check to make sure that all cables are connected and working properly.
- 3. Using the minimum configuration for troubleshooting: Remove all unnecessary components (starting with add-on cards first), and use the minimum configuration (but with a CPU and a memory module installed) to identify the trouble areas. Refer to the steps listed in <u>Section</u> 7.3 above for proper troubleshooting procedures.
- 4. Identifying bad components by isolating them: If necessary, remove a component in question from the chassis, and test it in isolation to make sure that it works properly. Replace a bad component with a good one.
- 5. Check and change one component at a time instead of changing several items at the same time. This will help isolate and identify the problem.
- 6. To find out if a component is good, swap this component with a new one to see if the system will work properly. If so, then the old component is bad. You can also install the component in question in another system. If the new system works, the component is good and the old system has problems.

7.4 BIOS Error Beep (POST) Codes

During the POST (Power-On Self-Test) routines, which are performed each time the system is powered on, errors may occur.

Non-fatal errors are those which, in most cases, allow the system to continue the boot-up process. The error messages normally appear on the screen.

Fatal errors are those which will not allow the system to continue the boot-up procedure. If a fatal error occurs, you should consult with your system manufacturer for possible repairs.

These fatal errors are usually communicated through a series of audible beeps. The table below lists some common errors and their corresponding beep codes encountered by users.

BIOS Error Beep (POST) Codes					
Beep Code	Error Message	Description			
1 short	Refresh	Circuits have been reset (Ready to power up)			
5 short, 1 long	Memory error	No memory detected in system			
5 long, 2 short	Display memory read/write error	Video adapter missing or with faulty memory			
1 long continuous	System OH	System overheat condition			

Additional BIOS POST Codes

The AMI BIOS supplies additional checkpoint codes, which are documented online at http://www.supermicro.com/support/manuals/ ("AMI BIOS POST Codes User's Guide").

When BIOS performs the Power On Self Test, it writes checkpoint codes to I/O port 0080h. If the computer cannot complete the boot process, a diagnostic card can be attached to the computer to read I/O port 0080h (Supermicro p/n AOC-LPC80-20).

For information on AMI updates, please refer to http://www.ami.com/products/.

7.5 Crash Dump Using BMC

In the event of a processor internal error (IERR) that crashes your system, you may want to provide information to support staff. You can download a crash dump of status information using BMC. The BMC manual is available at https://www.supermicro.com/en/solutions/management-software/bmc-resources.

Check BMC Error Log

- 1. Access the BMC web interface.
- 2. Click the Server Health tab, then Event Log to verify an IERR error.

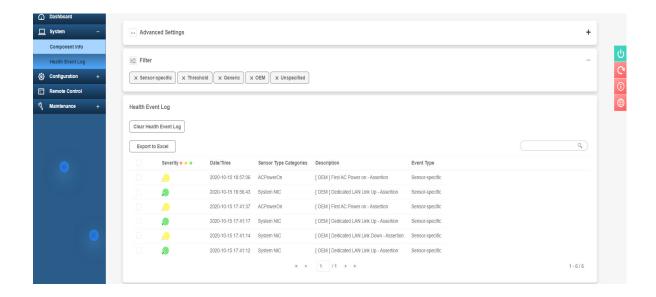


Figure 7-4. BMC Event Log

In the event of an IERR, the BMC executes a crash dump. You must download the crash dump and save it.

7.6 UEFI BIOS Recovery

Warning: Do not upgrade the BIOS unless your system has a BIOS-related issue. Flashing the wrong BIOS can cause irreparable damage to the system. In no event shall Supermicro be liable for direct, indirect, special, incidental, or consequential damages arising from a BIOS update. If you do update the BIOS, do not shut down or reset the system while the BIOS is updating to avoid possible boot failure.

Overview

The Unified Extensible Firmware Interface (UEFI) provides a software-based interface between the operating system and the platform firmware in the pre-boot environment. The UEFI specification supports an architecture-independent mechanism that will allow the UEFI OS loader stored in an add-on card to boot the system. The UEFI offers clean, hands-off management to a computer during system boot.

Recovering the UEFI BIOS Image

A UEFI BIOS flash chip consists of a recovery BIOS block and a main BIOS block (a main BIOS image). The recovery block contains critical BIOS codes, including memory detection and recovery codes for the user to flash a healthy BIOS image if the original main BIOS image is corrupted. When the system power is turned on, the recovery block codes execute first. Once this process is complete, the main BIOS code will continue with system initialization and the remaining POST (Power-On Self-Test) routines.

Note 1: Follow the BIOS recovery instructions below for BIOS recovery when the main BIOS block crashes.

Note 2: When the BIOS recovery block crashes, you will need to follow the procedures to make a Returned Merchandise Authorization (RMA) request. Also, you may use the Supermicro Update Manager (SUM) Out-of-Band (https://www.supermicro.com.tw/products/nfo/SMS_SUM.cfm) to reflash the BIOS.

Recovering the Main BIOS Block with a USB Device

This feature allows the user to recover the main BIOS image using a USB-attached device without additional utilities used. A USB flash device such as a USB Flash Drive, or a USB CD/DVD ROM/RW device can be used for this purpose. However, a USB Hard Disk drive cannot be used for BIOS recovery at this time.

The file system supported by the recovery block is FAT (including FAT12, FAT16, and FAT32) which is installed on a bootable or non-bootable USB-attached device. However, the BIOS might need several minutes to locate the SUPER.ROM file if the media size becomes too large due to the huge volumes of folders and files stored in the device.

To perform UEFI BIOS recovery using a USB-attached device, follow the instructions below.

- 1. Using a different machine, copy the "Super.ROM" binary image file into the Root "\" directory of a USB device or a writable CD/DVD.
 - **Note 1:** If you cannot locate the "Super.ROM" file in your drive disk, visit our website at www.supermicro.com to download the BIOS package. Extract the BIOS binary image into a USB flash device and rename it "Super.ROM" for the BIOS recovery use.
 - **Note 2:** Before recovering the main BIOS image, confirm that the "Super.ROM" binary image file you download is the same version or a close version meant for your motherboard.
- 2. Insert the USB device that contains the new BIOS image ("Super.ROM") into your USB drive and reset the system when the following screen appears.
- 3. After locating the healthy BIOS binary image, the system will enter the BIOS Recovery menu as shown below.



Note: At this point, you may decide if you want to start the BIOS recovery. If you decide to proceed with BIOS recovery, follow the procedures below.



4. When the screen as shown above displays, use the arrow keys to select the item "Proceed with flash update" and press the <Enter> key. You will see the BIOS recovery progress as shown in the screen below.

Note: Do not interrupt the BIOS flashing process until it has completed.

- 5. After the BIOS recovery process is complete, press any key to reboot the system.
- 6. Using a different system, extract the BIOS package into a USB flash drive.

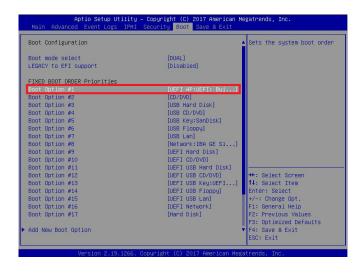


7. Press continuously during system boot to enter the BIOS Setup utility. From the top of the tool bar, select Boot to enter the submenu. From the submenu list, select Boot



Option #1 as shown below. Then, set Boot Option #1 to [UEFI AP:UEFI: Built-in EFI Shell]. Press <F4> to save the settings and exit the BIOS Setup utility.

8. When the UEFI Shell prompt appears, type fs# to change the device directory path. Go to the directory that contains the BIOS package you extracted earlier from Step 6. Enter flash.nsh BIOSname.### at the prompt to start the BIOS update process.



Note: Do not interrupt this process until the BIOS flashing is complete.

```
UEFI Interactive Shell v2.1
Ebx II
UEFI v2.50 (American Megatrands, 0x0005000C)
Hopping (soils Schedungs)
FSION STATE (Schedungs)
FSION STATE (Schedungs)
Experiment (Schedungs)
Experiment (Schedungs)
Experiment (Schedungs)
FPISS (Schedungs)
FPISS (Schedungs)
FPISS (Schedungs)
FSION STATE (SCHE
```

9. The screen above indicates that the BIOS update process is complete. When you see the screen above, unplug the AC power cable from the power supply, clear CMOS, and plug

```
Done
[ fixcess book Port Ex ]
(Read)
Index 0x51: 0x18

Done.

* * Frogram BIOS and ME (including FDT) regions...

* * Copyright (Column Annual Column Annual
```

the AC power cable in the power supply again to power on the system.

10. Press continuously to enter the BIOS Setup utility.

```
Verifying NOB Block ........done

- Undate success for IE. -
- Successful Update Recovery Loader to OPRX!!

- Successful Update Recovery Loader to OPRX!!

- Successful Update Recovery Loader to OPRX!!

- Successful Update RES!!-
- Successful Update RES!!-
- Successful Update REG. INTRI 10 and IVDX!!

- NE Critice Image update success !!

WHANIMA: System must power-off to have the changes take effect!

MOVING FSU:\NFILOS\SHIPMEZ_OBIGOIT\fdtx64_efl -> FSU:\NFILOS\SHIPMEZ_OBIGOIT\fd

OF INTRINIAL CONTROL OF INT
```

- 11. Press <F3> to load the default settings.
- 12. After loading the default settings, press <F4> to save the settings and exit the BIOS Setup utility.

7.7 CMOS Clear

JBT1 is used to clear CMOS, which will also clear any passwords. Instead of pins, this jumper consists of contact pads to prevent accidentally clearing the contents of CMOS.

To Clear CMOS

- 1. First <u>power down</u> the system completely.
- 2. Remove chassis side cover to access the motherboard.
- 3. Remove the onboard battery from the motherboard.
- 4. Short the CMOS pads with a metal object such as a small screwdriver for at least four seconds.
- 5. Remove the screwdriver or shorting device.
- 6. Re-install the motherboard battery.
- 7. Replace the cover, reconnect the power cords and power on the system.

Notes: Clearing CMOS will also clear all passwords.

Do not use the PW_ON connector to clear CMOS.



7.8 Where to Get Replacement Components

If you need replacement parts for your system, to ensure the highest level of professional service and technical support, purchase exclusively from our Supermicro Authorized Distributors/System Integrators/Resellers. A list can be found at: http://www.supermicro.com. Click the "Where to Buy" tab.

7.9 Reporting an Issue

Technical Support Procedures

Before contacting Technical Support, please take the following steps. If your system was purchased through a distributor or reseller, please contact them for troubleshooting services. They have the best knowledge of your specific system configuration.

- Please review the <u>Troubleshooting Procedures</u> in this manual and <u>Frequently Asked</u> <u>Questions</u> on our website before contacting Technical Support.
- 2. BIOS upgrades can be downloaded from our website. **Note**: Not all BIOS can be flashed depending on the modifications to the boot block code.
- 3. If you still cannot resolve the problem, include the following information when contacting us for technical support:
 - System, motherboard, and chassis model numbers and PCB revision number
 - BIOS release date/version (this can be seen on the initial display when your system first boots up)
 - System configuration

An example of a Technical Support form is posted on our <u>website</u>. Distributors: For immediate assistance, please have your account number ready when contacting our technical support department by email.

Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete.

For faster service, RMA authorizations may be requested online (http://www.supermicro.com/support/rma/).

Whenever possible, repack the chassis in the original Supermicro carton, using the original packaging material. If these are no longer available, be sure to pack the chassis securely, using packaging material to surround the chassis so that it does not shift within the carton and become damaged during shipping.

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alteration, misuse, abuse or improper maintenance of products.

During the warranty period, contact your distributor first for any product problems.

Vendor Support Filing System

For issues related to Intel, use the Intel IPS filing system:

https://www.intel.com/content/www/us/en/design/support/ips/training/welcome.html

For issues related to Red Hat Enterprise Linux, since it is a subscription based OS, contact your account representative.

7.10 Feedback

Supermicro values your feedback as we strive to improve our customer experience in all facets of our business. Please email us at techwriterteam@supermicro.com to provide feedback on our manuals.

Appendix A

Standardized Warning Statements for AC Systems

About Standardized Warning Statements

The following statements are industry standard warnings, provided to warn the user of situations which have the potential for bodily injury. Should you have questions or experience difficulty, contact Supermicro's Technical Support department for assistance. Only certified technicians should attempt to install or configure components.

Read this appendix in its entirety before installing or configuring components in the Supermicro chassis.

These warnings may also be found on our website at http://www.supermicro.com/about/policies/safety information.cfm.

Warning Definition



Warning! This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

警告の定義

この警告サインは危険を意味します。

人身事故につながる可能性がありますので、いずれの機器でも動作させる前に、

電気回路に含まれる危険性に注意して、標準的な事故防止策に精通して下さい。

此警告符号代表危险。

您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前,必须充分意识到触电的危险,并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾的声明号码找到此设备的安全性警告说明的翻译文本。

此警告符號代表危險。

您正處於可能身體可能會受損傷的工作環境中。在您使用任何設備之前,請注意觸電的危險,並且要熟悉預防事故發生的標準工作程序。請依照每一注意事項後的號碼找到相關的翻譯說明 內容。

Warnung

WICHTIGE SICHERHEITSHINWEISE

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES.

IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS.

תקנון הצהרות אזהרה

הצהרות הבאות הן אזהרות על פי תקני התעשייה, על מנת להזהיר את המשתמש מפני חבלה פיזית אפשרית. במידה ויש שאלות או היתקלות בבעיה כלשהי, יש ליצור קשר עם מחלקת תמיכה טכנית של סופרמיקרו. טכנאים מוסמכים בלבד רשאים להתקין או להגדיר את הרכיבים. יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

ا كَ ف حالة وُكِي أَى تتسبب ف اصابة جسذ ةٌ هذا الزهز عٌ خطز !تحذ زٌ . قبل أَى تعول على أي هعذات،كي على علن بالوخاطز ال اُجوة عي الذوائز الكهزبائ ة وكي على درا ةٌ بالووارسات اللقائ ة لو عٌ وقع أي حيادث استخذم رقن الب إى الو صُبص ف هًا ةٌ كل تحذ زٌ للعثير تزجوتها

안전을 위한 주의사항

경고!

이 경고 기호는 위험이 있음을 알려 줍니다. 작업자의 신체에 부상을 야기 할 수 있는 상태에 있게 됩니다. 모든 장비에 대한 작업을 수행하기 전에 전기회로와 관련된 위험요소들을 확인하시고 사전에 사고를 방지할 수 있도록 표준 작업절차를 준수해 주시기바랍니다.

해당 번역문을 찾기 위해 각 경고의 마지막 부분에 제공된 경고문 번호를 참조하십시오

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Dit waarschuwings symbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij een elektrische installatie betrokken risico's en dient u op de hoogte te zijn van de standaard procedures om ongelukken te voorkomen. Gebruik de nummers aan het eind van elke waarschuwing om deze te herleiden naar de desbetreffende locatie.

BEWAAR DEZE INSTRUCTIES

Installation Instructions



Warning! Read the installation instructions before connecting the system to the power source.

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告

将此系统连接电源前,请先阅读安装说明。

警告

將系統與電源連接前,請先閱讀安裝說明。

Warnung

Vor dem Anschließen des Systems an die Stromquelle die Installationsanweisungen lesen.

¡Advertencia!

Lea las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

Attention

Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

Raadpleeg de installatie-instructies voordat u het systeem op de voedingsbron aansluit.

Circuit Breaker



Warning! This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250 V, 20 A.

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。

保護装置の定格が250 V、20 Aを超えないことを確認下さい。

警告

此产品的短路(过载电流)保护由建筑物的供电系统提供,确保短路保护设备的额定电流不大于 250V,20A。

警告

此產品的短路(過載電流)保護由建築物的供電系統提供,確保短路保護設備的額定電流不大於 250V,20A。

Warnung

Dieses Produkt ist darauf angewiesen, dass im Gebäude ein Kurzschluss- bzw. Überstromschutz installiert ist. Stellen Sie sicher, dass der Nennwert der Schutzvorrichtung nicht mehr als: 250 V, 20 A beträgt.

¡Advertencia!

Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) del edificio. Asegúrese de que el dispositivo de protección no sea superior a: 250 V, 20 A.

Attention

Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifiez que le courant nominal du dispositif de protection n'est pas supérieur à :250 V, 20 A.

מוצר זה מסתמך על הגנה המותקנת במבנים למניעת קצר חשמלי. יש לוודא כי מוצר זה מסתמך על הגנה החשמלי הוא לא יותר מ-250VDC, 20A

هذا المنتج يعتمد على معداث الحمايت مه الدوائرالقصيرة التي تم تثبيتها في المبنى تقديم الحهاز الوقائي ليس أكثر من : 20A, 250V

경고!

이 제품은 전원의 단락(과전류)방지에 대해서 전적으로 건물의 관련 설비에 의존합니다. 보호장치의 정격이 반드시 250V(볼트), 20A(암페어)를 초과하지 않도록 해야 합니다.

Waarschuwing

Dit product is afhankelijk van de kortsluitbeveiliging (overspanning) van uw electrische installatie. Controleer of het beveiligde aparaat niet groter gedimensioneerd is dan 250V, 20A.

Power Disconnection Warning



Warning! The system must be disconnected from all sources of power and the power cord removed from the power supply module(s) before accessing the chassis interior to install or remove system components (except for hot-swap components).



電源切断の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシー内部にアクセスするには、 システムの電源はすべてのソースから切断され、電源コードは電源モジュールから取り外す必要が あります。

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前,必須將系統完全斷電,並移除電源線。

Warnung

Das System muss von allen Quellen der Energie und vom Netzanschlusskabel getrennt sein, das von den Spg. Versorgungsteilmodulen entfernt wird, bevor es auf den Chassisinnenraum zurückgreift, um Systemsbestandteile anzubringen oder zu entfernen.

¡Advertencia!

El sistema debe ser disconnected de todas las fuentes de energía y del cable eléctrico quitado de los módulos de fuente de alimentación antes de tener acceso el interior del chasis para instalar o para quitar componentes de sistema.

Attention

Le système doit être débranché de toutes les sources de puissance ainsi que de son cordon d'alimentation secteur avant d'accéder à l'intérieur du chassis pour installer ou enlever des composants de système.

אזהרה מפני ניתוק חשמלי

אזהרה!

יש לנתק את המערכת מכל מקורות החשמל ויש להסיר את כבל החשמלי מהספק. לפני גישה לחלק הפנימי של המארז לצורך התקנת או הסרת רכיבים.

يجب فصم اننظاو من جميع مصادر انطاقت وإزانت سهك انكهرباء من وحدة امداد انطاقت قبم انطاقت الجهاز انتصل إنى انمناطق انداخهبت نههبكم نتثبيج أو إزانت مكينات الجهاز

경고!

시스템에 부품들을 장착하거나 제거하기 위해서는 섀시 내부에 접근하기 전에 반드시 전원 공급장치로부터 연결되어있는 모든 전원과 전기코드를 분리해주어야 합니다.

Waarschuwing

Voordat u toegang neemt tot het binnenwerk van de behuizing voor het installeren of verwijderen van systeem onderdelen, dient u alle spanningsbronnen en alle stroomkabels aangesloten op de voeding(en) van de behuizing te verwijderen

Equipment Installation



Warning! Only authorized personnel and qualified service persons should be allowed to install, replace, or service this equipment.

機器の設置

トレーニングを受け認定された人だけがこの装置の設置、交換、またはサービスを許可されています。

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓月具資格人員才可安裝、更換與維修此設備。

Warnung

Nur autorisiertes Personal und qualifizierte Servicetechniker dürfen dieses Gerät installieren, austauschen oder warten..

¡Advertencia!

Sólo el personal autorizado y el personal de servicio calificado deben poder instalar, reemplazar o dar servicio a este equipo.

Attention

Seul le personnel autorisé et le personnel de maintenance qualifié doivent être autorisés à installer, remplacer ou entretenir cet équipement.

!אזהרה

יש לאפשר רק צוות מורשה ואנשי שירות מוסמכים להתקין, להחליף או לטפל בציוד זה.

ينبغى السماح فقط للموظفين المعتمدين وأفراد الخدمة المؤهلين بتركيب هذا الجهاز أو استبداله أو صيانته

경고!

승인된 직원과 자격을 갖춘 서비스 담당자만이 이 장비를 설치, 교체 또는 서비스할 수 있습니다.

Waarschuwing

Alleen geautoriseerd personeel en gekwalificeerd onderhoudspersoneel mag deze apparatuur installeren, vervangen of onderhouden..

Restricted Area



Warning! This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. (This warning does not apply to workstations).

アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

アクセス制限区域は、特別なツール、鍵と錠前、その他のセキュリティの手段を用いてのみ出入りが可能です。

警告

此部件应安装在限制进出的场所,限制进出的场所指只能通过使用特殊工具、锁和钥匙或其它安全手段进出的场所。

警告

此裝置僅限安裝於進出管制區域,進出管制區域係指僅能以特殊工具、鎖頭及鑰匙或其他安全 方式才能進入的區域。

Warnung

Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Der Zutritt zu derartigen Bereichen ist nur mit einem Spezialwerkzeug, Schloss und Schlüssel oder einer sonstigen Sicherheitsvorkehrung möglich.

¡Advertencia!

Esta unidad ha sido diseñada para instalación en áreas de acceso restringido. Sólo puede obtenerse acceso a una de estas áreas mediante la utilización de una herramienta especial, cerradura con llave u otro medio de seguridad.

Attention

Cet appareil doit être installée dans des zones d'accès réservés. L'accès à une zone d'accès réservé n'est possible qu'en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité.

אזור עם גישה מוגבלת

!אזהרה

יש להתקין את היחידה באזורים שיש בהם הגבלת גישה. הגישה ניתנת בעזרת 'כלי אבטחה בלבד)מפתח, מנעול וכד.)

تخصيص هذه اندخذة نترك بها ف مناطق محظورة تم . ، مكن اندصل إن منطقت محظورة فقط من خلال استخذاو أداة خاصت أو أوس هُت أخري نلالأمما قفم ومفتاح

경고!

이 장치는 접근이 제한된 구역에 설치하도록 되어있습니다. 특수도구, 잠금 장치 및 키, 또는 기타 보안 수단을 통해서만 접근 제한 구역에 들어갈 수 있습니다.

Waarschuwing

Dit apparaat is bedoeld voor installatie in gebieden met een beperkte toegang. Toegang tot dergelijke gebieden kunnen alleen verkregen worden door gebruik te maken van speciaal gereedschap, slot en sleutel of andere veiligheidsmaatregelen.

Battery Handling



CAUTION: There is risk of explosion if the battery is replaced by an incorrect type. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions

電池の取り扱い

バッテリーを間違ったタイプに交換すると爆発の危険があります。 交換する電池はメーカーが推 奨する型、または同等のものを使用下さい。 使用済電池は製造元の指示に従って処分して下さ い。

警告

如果更换的电池类型不正确,则存在爆炸危险。请只使用同类电池或制造商推荐的功能相当的电池更换原有电池。请按制造商的说明处理废旧电池。

警告

如果更換的電池類型不正確,則有爆炸危險。請使用製造商建議之相同或功能相當的電池更換原有電池。請按照製造商的說明指示處理廢棄舊電池。

WARNUNG

Es besteht Explosionsgefahr, wenn die Batterie durch einen falschen Typ ersetzt wird. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

ATTENTION

Il existe un risque d'explosion si la batterie est remplacée par un type incorrect. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

ADVERTENCIA

Existe riesgo de explosión si la batería se reemplaza por un tipo incorrecto. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

אזהרה!

קיימת סכנת פיצוץ אם הסוללה תוחלף בסוג שגוי. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת. סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן. .هناك خطر الانفجار إذا تم استبدال البطارية بنوع غير صحيح اسحبذال البطارية فقط بنفس النبع أو ما يعادلها مما أوصت به الشرمة المصنعة حخلص من البطاريات المسحعملة وفقا لحعليمات الشرمة الصانعة

경고!

배터리를 잘못된 종류로 교체하면 폭발의 위험이 있습니다. 기존 배터리와 동일하거나 제조 사에서 권장하는 동등한 종류의 배터리로만 교체해야 합니다. 제조사의 안내에 따라 사용된 배터리를 처리하여 주십시오.

WAARSCHUWING

Er bestaat explosiegevaar als de batterij wordt vervangen door een verkeerd type. Vervang de batterij slechts met hetzelfde of een equivalent type die door de fabrikant aanbevolen wordt. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften afgevoerd te worden.

Redundant Power Supplies



Warning! This unit might have more than one power supply connection. All connections must be removed to de-energize the unit.

冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。

ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

警告

此部件连接的电源可能不止一个,必须将所有电源断开才能停止给该部件供电。

警告

此裝置連接的電源可能不只一個,必須切斷所有電源才能停止對該裝置的供電。

Warnung

Dieses Gerät kann mehr als eine Stromzufuhr haben. Um sicherzustellen, dass der Einheit kein trom zugeführt wird, müssen alle Verbindungen entfernt werden.

¡Advertencia!

Puede que esta unidad tenga más de una conexión para fuentes de alimentación. Para cortar por completo el suministro de energía, deben desconectarse todas las conexiones.

Attention

Cette unité peut avoir plus d'une connexion d'alimentation. Pour supprimer toute tension et tout courant électrique de l'unité, toutes les connexions d'alimentation doivent être débranchées.

אם קיים יותר מספק אחד

אזהרה!

ליחדה יש יותר מחיבור אחד של ספק. יש להסיר את כל החיבורים על מנת לרוקן את היחידה.

> قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة . بجب إزالة كافة الاتصالات لعسل الوحدة عن الكهرباء

경고!

이 장치에는 한 개 이상의 전원 공급 단자가 연결되어 있을 수 있습니다. 이 장치에 전원을 차단하기 위해서는 모든 연결 단자를 제거해야만 합니다.

Waarschuwing

Deze eenheid kan meer dan één stroomtoevoeraansluiting bevatten. Alle aansluitingen dienen verwijderd te worden om het apparaat stroomloos te maken.

Backplane Voltage



Warning! Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing.

バックプレーンの電圧

システムの稼働中は危険な電圧または電力が、バックプレーン上にかかっています。

修理する際には注意ください。

警告

当系统正在进行时,背板上有很危险的电压或能量,进行维修时务必小心。

警告

當系統正在進行時,背板上有危險的電壓或能量,進行維修時務必小心。

Warnung

Wenn das System in Betrieb ist, treten auf der Rückwandplatine gefährliche Spannungen oder Energien auf. Vorsicht bei der Wartung.

¡Advertencia!

Cuando el sistema está en funcionamiento, el voltaje del plano trasero es peligroso. Tenga cuidado cuando lo revise.

Attention

Lorsque le système est en fonctionnement, des tensions électriques circulent sur le fond de panier. Prendre des précautions lors de la maintenance.

מתח בפנל האחורי

אזהרה!

קיימת סכנת מתח בפנל האחורי בזמן תפעול המערכת. יש להיזהר במהלך

העבודה.

هناك خطز مه التيار الكهزبائي أوالطاقة المبجدة على اللبحة عندما يكنن النظام يعمل كه حذرا عند خدمة هذا الجهاس

경고!

시스템이 동작 중일 때 후면판 (Backplane)에는 위험한 전압이나 에너지가 발생 합니다. 서비스 작업 시 주의하십시오.

Waarschuwing

Een gevaarlijke spanning of energie is aanwezig op de backplane wanneer het systeem in gebruik is. Voorzichtigheid is geboden tijdens het onderhoud.

Comply with Local and National Electrical Codes



Warning! Installation of the equipment must comply with local and national electrical codes.

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La instalacion del equipo debe cumplir con las normas de electricidad locales y nacionales.

Attention

L'équipement doit être installé conformément aux normes électriques nationales et locales.

תיאום חוקי החשמל הארצי

אזהרה!

התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمتثل للقناويه المحلية والنطبية المتعلقة بالكهرباء

경고!

현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing

Bij installatie van de apparatuur moet worden voldaan aan de lokale en nationale elektriciteitsvoorschriften.

Product Disposal



Warning! Ultimate disposal of this product should be handled according to all national laws and regulations.

製品の廃棄

この製品を廃棄処分する場合、国の関係する全ての法律・条例に従い処理する必要があります。

警告

本产品的废弃处理应根据所有国家的法律和规章进行。

警告

本產品的廢棄處理應根據所有國家的法律和規章進行。

Warnung

Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.

¡Advertencia!

Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.

Attention

La mise au rebut ou le recyclage de ce produit sont généralement soumis à des lois et/ou directives de respect de l'environnement. Renseignez-vous auprès de l'organisme compétent.

סילוק המוצר

אזהרה!

סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות וחוקי המדינה.

التخلص النهائي من هذا المنتج ينبغى التعامل معه وفقا لجميع القبانين واللبائح البطنية عند

경고!

이 제품은 해당 국가의 관련 법규 및 규정에 따라 폐기되어야 합니다.

Waarschuwing

De uiteindelijke verwijdering van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.

Fan Warning





Warning! Hazardous moving parts. Keep away from moving fan blades. The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

ファンの警告

警告!回転部品に注意。運転中は回転部(羽根)に触れないでください。シャーシから冷却ファン装置を取り外した際、ファンがまだ回転している可能性があります。ファンの開口部に、指、ドライバー、およびその他のものを近づけないで下さい。

警告!

警告!危险的可移动性零件。请务必与转动的风扇叶片保持距离。 当您从机架移除风扇装置、风扇可能仍在转动。小心不要将手指、螺丝起子和其他物品太靠近风扇

警告

危險的可移動性零件。請務必與轉動的風扇葉片保持距離。 當您從機架移除風扇裝置,風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

Warnung

Gefährlich Bewegende Teile. Von den bewegenden Lüfterblätter fern halten. Die Lüfter drehen sich u. U. noch, wenn die Lüfterbaugruppe aus dem Chassis genommen wird. Halten Sie Finger, Schraubendreher und andere Gegenstände von den Öffnungen des Lüftergehäuses entfernt.

¡Advertencia!

Riesgo de piezas móviles. Mantener alejado de las aspas del ventilador. Los ventiladores podran dar vuelta cuando usted quite ell montaje del ventilador del chasis. Mandtenga los dedos, los destornilladores y todos los objetos lejos de las aberturas del ventilador

Attention

Pieces mobiles dangereuses. Se tenir a l'ecart des lames du ventilateur II est possible que les ventilateurs soient toujours en rotation lorsque vous retirerez le bloc ventilateur du châssis. Prenez garde à ce que doigts, tournevis et autres objets soient éloignés du logement du bloc ventilateur.

אזהרה!

חלקים נעים מסוכנים. התרחק מלהבי המאוורר בפעולהכאשר מסירים את חלקי המאוורר מהמארז, יתכן והמאווררים עדיין עובדים. יש להרחיק למרחק בטוח את האצבעות וכלי עבודה שונים מהפתחים בתוך המאוורר

تحذير! أجزاء متحركة خطرة. ابتعد عن شفرات المروحة المتحركة.من الممكن أن المراوح لا تزال تدورعند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع .ومفكات البراغي وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة

경고!

움직이는 위험한 부품. 회전하는 송풍 날개에 접근하지 마세요. 섀시로부터 팬 조립품을 제거할 때 팬은 여전히 회전하고 있을 수 있습니다. 팬 조림품 외관의 열려있는 부분들로부터 손가락 및 스크류드라이버, 다른 물체들이 가까이 하지 않도록 배치해 주십시오.

Waarschuwing

Gevaarlijk bewegende onderdelen. Houd voldoende afstand tot de bewegende ventilatorbladen. Het is mogelijk dat de ventilator nog draait tijdens het verwijderen van het ventilatorsamenstel uit het chassis. Houd uw vingers, schroevendraaiers en eventuele andere voorwerpen uit de buurt van de openingen in de ventilatorbehuizing.

Power Cable and AC Adapter



Warning! When installing the product, use the provided or designated connection cables, power cables and AC adaptors. Using any other cables and adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA -certified cables (that have UL/CSA shown on the cord) for any other electrical devices than products designated by Supermicro only.

電源コードとACアダプター

製品を設置する場合、提供または指定および購入された接続ケーブル、電源コードとACアダプターを該当する地域の条例や安全基準に適合するコードサイズやプラグと共に使用下さい。他のケーブルやアダプタを使用すると故障や火災の原因になることがあります。

電気用品安全法は、ULまたはCSA認定のケーブル(UL/CSAマークがコードに表記)を Supermicro が指定する製品以外に使用することを禁止しています。

警告

安装此产品时,请使用本身提供的或指定的或采购的连接线,电源线和电源适配器,包含遵照当地法规和安全要求的合规的电源线尺寸和插头.使用其它线材或适配器可能会引起故障或火灾。除了Supermicro所指定的产品,电气用品和材料安全法律规定禁止使用未经UL或CSA认证的线材。(线材上会显示UL/CSA符号)。

警告

安裝此產品時,請使用本身提供的或指定的或採購的連接線,電源線和電源適配器‧包含遵照當地法規和安全要求的合規的電源線尺寸和插頭.使用其它線材或適配器可能會引起故障或火災。除了Supermicro所指定的產品,電氣用品和材料安全法律規定禁止使用未經UL或CSA認證的線材。(線材上會顯示UL/CSA符號)。

Warnung

Nutzen Sie beim Installieren des Produkts ausschließlich die von uns zur Verfügung gestellten Verbindungskabeln, Stromkabeln und/oder Adapater, die Ihre örtlichen Sicherheitsstandards einhalten. Der Gebrauch von anderen Kabeln und Adapter können Fehlfunktionen oder Feuer verursachen. Die Richtlinien untersagen das Nutzen von UL oder CAS zertifizierten Kabeln (mit UL/CSA gekennzeichnet), an Geräten oder Produkten die nicht mit Supermicro gekennzeichnet sind.

¡Advertencia!

Cuando instale el producto, utilice la conexión provista o designada o procure cables, Cables de alimentación y adaptadores de CA que cumplan con los códigos locales y los requisitos de seguridad, incluyendo el tamaño adecuado del cable y el enchufe. El uso de otros cables y adaptadores podría causar un mal funcionamiento o un incendio. La Ley de Seguridad de Aparatos Eléctricos y de Materiales prohíbe El uso de cables certificados por UL o CSA (que tienen el certificado UL / CSA en el código) para cualquier otros dispositivos eléctricos que los productos designados únicamente por Supermicro.

Attention

Lors de l'installation du produit, utilisez les cables de connection fournis ou désigné ou achetez des cables, cables de puissance et adaptateurs respectant les normes locales et les conditions de securite y compris les tailles de cables et les prises electriques appropries. L'utilisation d'autres cables et adaptateurs peut provoquer un dysfonctionnement ou un incendie. Appareils électroménagers et la Loi sur la Sécurité Matériel interdit l'utilisation de câbles certifies- UL ou CSA (qui ont UL ou CSA indiqué sur le code) pour tous les autres appareils électriques sauf les produits désignés par Supermicro seulement.

מאתמו םיילמשח םילבכ AC

הרהזא!

ךרוצל ומאתוה וא ושכרנ רשא AC םימאתמו םיקפס ,םילבכב שמתשהל שי ,רצומה תא םיניקתמ רשאכ לכב שומיש . עקתהו לבכה לש הנוכנ הדימ ללוכ ,תוימוקמה תוחיטבה תושירדל ומאתוה רשאו ,הנקתהה למשחה ירישכמב שומישה יקוחל םאתהב .ילמשח רצק וא הלקתל םורגל לולע ,רחא גוסמ םאתמ וא לבכ לש דוק םהילע עיפומ רשאכ) CSA-ב וא UL -ב םיכמסומה םילבכב שמתשהל רוסיא םייק ,תוחיטבה יקוחו .דבלב Supermicro י"ע םאתוה רשא רצומב קר אלא ,רחא ילמשח רצומ לכ רובע UL/CSA)

تالباكلا ءارشب مق وأ قددحملا وأ قرفوت مل تالي صوت المادخت ساب مق ، جتن مل بي كرت دن ع كلذ يف امب قيل حمل قمال سال تابلطتمو نين اوقب مازت اللا عم ددرت مل رايت اتال وحمو قيئ البر مكلا قي رح وأ لطع يف ببست دق عرخ اتال وحمو تالباك يأ مادخت الله ميلسل الله الله والله والله

전원 케이블 및 AC 어댑터

경고! 제품을 설치할 때 현지 코드 및 적절한 굵기의 코드와 플러그를 포함한 안전 요구 사항을 준수하여 제공되거나 지정된 연결 혹은 구매 케이블, 전원 케이블 및 AC 어댑터를 사용하십시오.

다른 케이블이나 어댑터를 사용하면 오작동이나 화재가 발생할 수 있습니다. 전기 용품 안전법은 UL 또는 CSA 인증 케이블 (코드에 UL / CSA가 표시된 케이블)을 Supermicro 가 지정한 제품 이외의 전기 장치에 사용하는 것을 금지합니다.

Stroomkabel en AC-Adapter

Waarschuwing! Bij het aansluiten van het Product uitsluitend gebruik maken van de geleverde Kabels of een andere geschikte aan te schaffen Aansluitmethode, deze moet altijd voldoen aan de lokale voorschriften en veiligheidsnormen, inclusief de juiste kabeldikte en stekker. Het gebruik van niet geschikte Kabels en/of Adapters kan een storing of brand veroorzaken. Wetgeving voor Elektrische apparatuur en Materiaalveiligheid verbied het gebruik van UL of CSA -gecertificeerde Kabels (met UL/CSA in de code) voor elke andere toepassing dan de door Supermicro hiervoor beoogde Producten.

Appendix B System Specifications

Processors

Dual Intel Xeon 3rd Gen Intel Xeon Scalable Processors (Socket P+) with up to 40 cores and a thermal design power (TDP) of up to 270 W

Note: Refer to the motherboard specifications pages on our website for updates to supported processors. Certain CPU SKUs are conditionally supported. Please contact Supermicro Technical Support for additional information about specialized system optimization.

Chipset

Intel PCH C621A

BIOS

AMI BIOS

ACPI 3.0 or later, PCI firmware 4.0 support, BIOS rescue hot-key, SPI dual/quad speed support, RTC (Real Time Clock) wakeup, and SMBIOS 3.0 or later

Memory

Up to 4 TB of 3DS LRDIMM/LRDIMM/3DS RDIMM/RDIMM DDR4 (288-pin) ECC memory with speeds of 3200/2933/2666 MHz in 16 memory slots and up to 4 TB of Intel Optane PMem 200 Series with speeds of up to 3200 MHz

Note: PMem 200 Series are supported on 3rd gen Intel Xeon Scalable Platinum, Gold and selected Silver processors.

Storage Drives

Drive Bays:

Four fixed 3.5" SATA drive bays

Connectors:

Two onboard NVMe connectors (optional cables required for NVMe support)

One VROC Key header

PCI Expansion Slots

One PCIe 4.0 x8 slot

Five PCIe 4.0 x16 slots

Two onboard PCle 4.0 x4 M.2 slots in the 2280 and 22110 form factors

Networking

Two 1 GbE LAN ports

Input/Output

COM: one onboard serial COM header

SATA: eight onboard S-SATA 3.0 ports (two are SuperDOM supported)

VGA: one rear VGA port

 $USB: four \ rear\ USB\ 3.2\ Gen\ 1\ ports,\ one\ rear\ USB\ 3.2\ Gen\ 2\ port,\ two\ front\ USB\ 3.2\ Gen\ 1\ ports,\ one\ front\ USB\ 3.2\ Gen\ 2$

Type-C port

Audio: 7.1 HD Audio rear ports, one onboard buzzer header, one front line-out, one front mic-in

Motherboard

X12DAi-N6

Chassis

CSE-735D4-1K26B

Security

Onboard TPM/Port 80 header

System Cooling

Two internal fans, two CPU heatsinks (sold separately)

Power Supply

Model: PWS-1K26P-PQ, 1200 W, 80Plus Platinum level

AC Input

100-127 Vac, 9-7.5A, 50-60 Hz 200-240 Vac, 6-5A, 50-60 Hz

+12V

Max: 66.7 A, Min: 0 A (100 Vac-127 Vac)
Max: 83 A, Min: 0 A (200 Vac-240 Vac)
+5 V standby: Max: 4 A, Min: 0 A

Operating Environment

Operating Temperature: 10°C to 40°C (50°F to 95°F)

Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)

Operating Relative Humidity: 8% to 90% (non-condensing)

Non-operating Relative Humidity: 5% to 95% (non-condensing)

Regulatory Compliance

FCC Class A, ICES, CE, VCCI, RCM, NRTL, CB

Applied Directives, Standards

EMC/EMI: 2014/30/EU (EMC Directive)

Electromagnetic Compatibility Regulations 2016

FCC Part 15 Subpart B

ICES-003

VCCI-CISPR 32

AS/NZS CISPR 32

BS/EN55032

BS/EN55035

BS/EN 61000-3-2

BS/EN 61000-3-3

BS/EN 61000-4-2

BS/EN 61000-4-3

BS/EN 61000-4-4

BS/EN 61000-4-5

BS/EN 61000-4-6

BS/EN 61000-4-8

BS/EN 61000-4-11

Environment:

Delegated Directive (EU) 2015/863 Directive 2011/65/EU (RoHS)

REACH Regulation EC 1907/2006

WEEE Directive 2012/19/EU California Proposition 65

Product Safety: 2014/35/EU (LVD Directive) Electrical Equipment (Safety) Regulations 2016

UL/CSA 62368-1 (USA and Canada)

BS/IEC/EN 62368-1

Perchlorate Warning

California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. "Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate"

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI - A

BSMI/RoHS

限用物質含有情況標示聲明書 Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱: 超級工作站 / SuperWorkstation

Equipment name

型號(型式):735-S12X12 (系列型號: 735-12、SYS-730A-I)

Type designation (Type)

	限用物質及其化學符號 Restricted substances and its chemical symbols						
單元Unit	鉛Lead (Pb)	汞Mercury (Hg)	編Cadmium (Cd)		多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
機殼 (Chassis)	0	0	0	0	0	0	
機殼風扇 (Chassis Fan)	-	0	0	0	0	0	
線材 (Cable)	0	0	0	0	0	0	
主機板 (Motherboard)	-	0	0	0	0	0	
電源供應器 (Power Supply)	-	0	0	0	0	0	
光碟機(選配) (DVD, Option)	-	0	0	0	0	0 0	
硬碟 (HDD, SSD)	-	0	0	0	0	0	
附加卡 (Add-on Card)	-	0	0	0	0	0	

備考1. "超出0.1 wt %"及 "超出0.01 wt %"係指限用物質之百分比含量超出百分比含量基準值。

Note 1: "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. "○" 係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2: " \bigcirc " indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. "-"係指該項限用物質為排除項目。

Note 3: The "-" indicates that the restricted substance corresponds to the exemption.

警告:	為避免電磁干擾,	本產品不應安裝或使用於住宅環境。

輸入額定:

100-240V ~, 60-50Hz, 10-5A

*使用者不能任意拆除或替換內部配備

*報驗義務人之姓名或名稱:美超微電腦股份有限公司

*報驗義務人之地址:新北市中和區建一路 150號 3樓



瀒

BUREAU OF STANDARDS, METROLOGY AND INSPECTION, MINISTRY OF ECONOMIC AFFAIRS

商品驗證登錄證書

CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION



證書號碼: CI363061993667 號 00

Certificate No.

美超微電腦股份有限公司

申請驗證登錄,經審查結果符合規

統一編號: 12729477

。 其登錄事項如下:

定,准予登錄並使用商品安全標章 及識別號碼:

SUPER MICRO COMPUTER, INC. TAIWAN

for Registration of Product

Certification has been reviewed and found to be in compliance with related regulations. Therefore, registration is granted with the R36199

Product Safety Mark and the Identification No.

. Details of the registration are follows :

Uniform No.

申 請 人 : 美超微電腦股份有限公司 Applicant

地

址 : 新北市中和區建一路150號3樓

Address

生產廠場 : 詳如附表

Factory

廠 址:詳如附表

Factory Address

商品種類名稱:

Type/name of product

商品分類號列: 8471.49.00.00.7

C.C.C Code

中文名稱: 超級工作站

Chinese name

英文名稱: SuperWorkstation

English name

式: 735-S12X12 型

Type

系列型式 : 735-12, SYS-730A-I(以下空白)

Series of the type

依據標準 : CNS15598-1 (109年06月)、CNS15936 (105年09月)、符合CNS 15663第5節「

含有標示」規定 102年7月

標準檢驗局發證(發證地址:100臺北市中正區濟南路1段4號) This certificate is issued by the BSMI. (No.4, Sec. 1, Jinan Rd., Zhongzheng Dist., Taipei City 100, Taiwan) 本證書以電子文件行之,所載內容若有不符之處,以標準檢驗局系統登錄資料為主,查詢證書

資料網址:https://civi	l.bsm:	i.gov.tw				
登錄日期:中華民國	114	年	01	月	06	日
Registration Date 本證書有效期限至	$\begin{array}{c} 2025 \\ 117 \end{array}$	(year) 年	$ 01 \\ 01 $	(month) 月	$\overset{06}{05}$	(day) 日
Expiration Date	2028	(year)	01	(month)	05	(day)
發證日期:中華民國	114	年	01	月	06	日
Date of issue	2025	(year)	01	(month)	06	(day)

註1:持本證書進口驗證登錄商品時,進口人須與本證書名義人相同。

註2: 次年度商品驗證登錄年費繳納期限為當年11月30日,逾期未繳納者,經限期繳納屆期未繳納,即依商品檢 驗法第42條第7款規定廢止驗證登錄,並自次年度1月1日起生效。

註3:本證書僅代表完成檢驗程序,不作為其他(如產地)證明。

列印序號:3316913949163016036

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經濟部標準檢驗局 BUREAU OF STANDARDS,METROLOGY AND INSPECTION, MINISTRY OF ECONOMIC AFFAIRS

商品驗證登錄證書

CERTIFICATE OF THE REGISTRATION OF PRODUCT CERTIFICATION

證書號碼: CI363061993667 號 00

Certificate No.

生產廠場: 1. SUPER MICRO COMPUTER, INC.

Factory: 782 Ridder Park Drive, San Jose, CA95131, USA

- 2. Compuware Technology Inc. 3F., No. 306, Changan St., Bade District, Taoyuan City 33463, Taiwan
- 3. SUPER MICRO COMPUTER, INC. 980 Rock Ave, San Jose, CA95131, USA
- 4. SUPER MICRO COMPUTER, INC.
 No. 1899, Xingfeng Road, Da An Vil, Bade District,
 Taoyuan City 33463, Taiwan
- 5. SUPER MICRO COMPUTER B.V.
 Het Sterrenbeeld 12-16, 5215 ML 'S-Hertogenbosch, The
 Netherlands

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列印序號:3316913949163016036

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