

OPEN Industry Standard, Flexible Architecture

GREEN Less Heat, Less Power Consumption

STABLE Robust Design, Quality Parts

Stable and
Reliable Solution

Server/Workstation
Motherboard

1U2-X570/2T

User Manual

English



Version 1.0

Published January 2022

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.

“Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate”

ASRock Rack's Website: www.ASRockRack.com

Setting up the Server in a Restricted Access Location

- Access can only be gained by service persons or by users who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.
- Access is through the use of a tool or lock and key, or other means of security, and is controlled by the authority responsible for the location.
- Leave enough clearance (25 inches in the front and 30 inches in the back of the rack) to allow the front door to be opened completely and to allow for sufficient airflow.
- This product is for installation merely in a Restricted Access Location.
- This product is not suitable for use with visual display work place devices according to §2 of the the German Ordinance for Work with Visual Display Units.

Replaceable Batteries

CAUTION

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS**

Warning

When removal of the chassis lid required for servicing:

- Turn off power and unplug any power cords/cables, and
- Reinstall the chassis lid before restoring power.

Important Safety Instructions

Pay close attention to the following safety instructions before performing any of the operation. Basic safety precautions should be followed to protect yourself from harm and the product from damage:

- Operation of the product should be carried out by suitably trained, qualified, and certified personnel only to avoid risk of injury from electrical shock or energy hazard.
- Disconnect the power cord from the wall outlet when installing or removing main system components, such as the motherboard and power supply unit.
- Place the system on a stable and flat surface.
- Use extreme caution when working with high-voltage components.
- When handling parts, use a grounded wrist strap designed to prevent static discharge.
- Keep the area around the system clean and clutter-free.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags when not in use.
- Handle a board by its edges only; do not touch its components, peripheral chips, memory modules or contacts.

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Chapter 1 Introduction

Thank you for purchasing 1U2-X570/2T, a reliable barebone system produced under ASRock Rack's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock Rack's commitment to quality and endurance.



Because the hardware specifications might be updated, the content of this documentation will be subject to change without notice. In case any modifications of this documentation occur, the updated version will be available on ASRock Rack's website without further notice. If you require technical support related to this product, please visit our website for specific information about the model you are using.

ASRock Rack's Website: www.ASRockRack.com



The illustrations shown in this manual are examples only, the actual system may differ slightly.

1.1 Shipping Box Contents

Item	Quantity
1U2-X570/2T Barebone (1U form factor)	1
System Boards (MB)	1
Power Supply Unit	1
System Fans	3
HDD Backplane (BPB)	2
Front Panel Board (FPB)	1
OCuLink to 4*SATA Cable	1
OCuLink to PCIE68P+4Pin Cable	1
24Pin-to-4Pin Converter Cable	1
24Pin-to-4Pin Power Cable	1
8pin 12V Power Cable	1
Fan Cables	3
Accessory Box	1
1U Cooler	1
Slide Rail	1



If any items are missing or appear damaged, contact your authorized dealer.

1.2 Specifications

1U2-X570/2T	
System Physical Status	
Form Factor	1U Rackmount
Dimension (D x W x H)	250 x 430 x 43.5 mm (9.84" x 16.93" x 1.71")
Support MB Size	mini-ITX (X570D4I-2T)
Front Panel	
Buttons	• Power On/Standby button • System reset button
LEDs	• Power LED • Hard drive activity LED • 2 x Network activity LEDs
I/O Ports	2 x USB 3.2 Gen1 ports
Drive Bay	
Internal	2 Bay (1 for 2.5" SATA HDD*1 + 3.5" SATA HDD*1 (6Gb/s); 1 for 2.5" NVME SSD*1)
System Cooling	
Fan	40 x 28 mm PWM Easy-Swap Fans x 3
Power Supply	
Type	Single PSU (Flex-ATX)
Output Watts	265W
Efficiency	Bronze

*Please be noted that the functions are supported depending on the type of the server board.

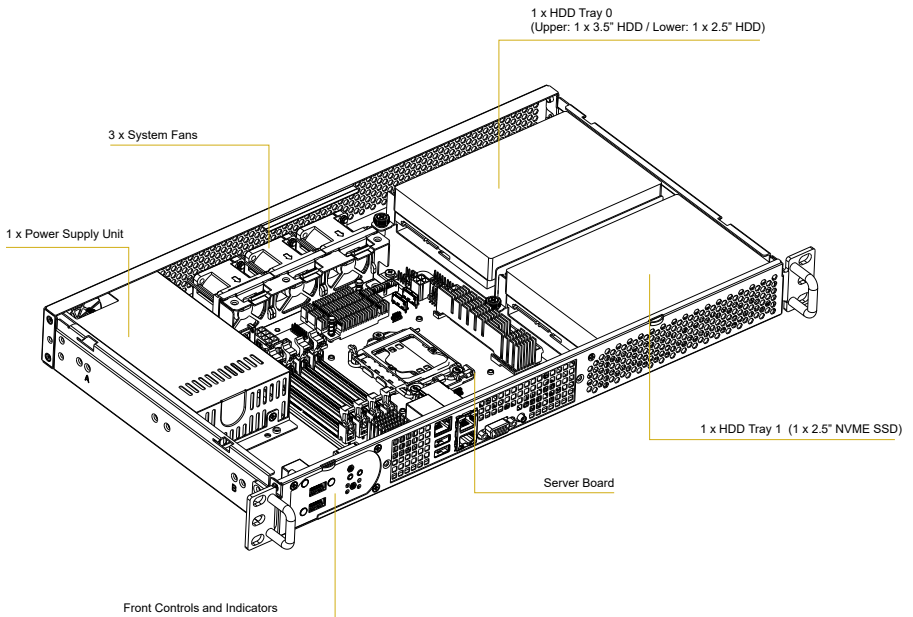


Please refer to the user manual of the motherboard you use for detailed information about motherboard components and features.

Chapter 2 Server System Overview

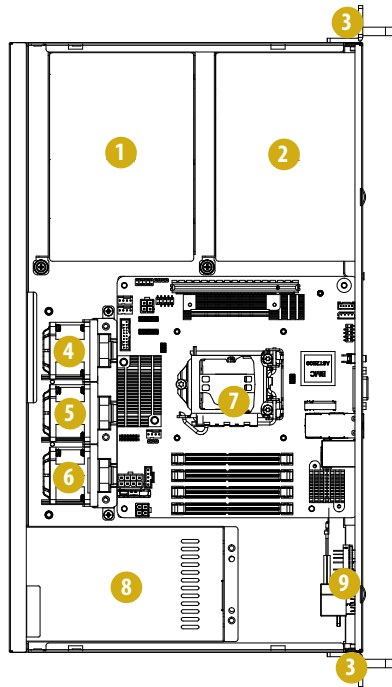
This chapter provides diagrams showing the location of important components of the server system.

2.1 System Components



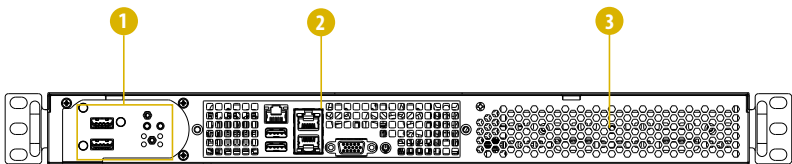
**The illustrations in this User Manual are for references only. The actual product may be slightly different by SKU.*

2.2 Internal Features



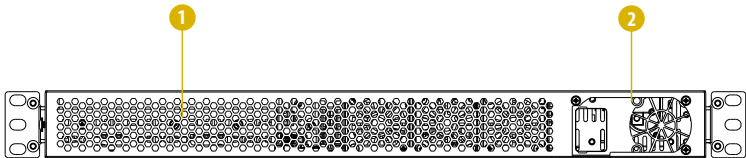
No.	From
1	1 x HDD Tray 0 (Upper: 1 x 3.5" HDD / Lower: 1 x 2.5" HDD)
2	1 x HDD Tray 1 (1 x 2.5" NVME SSD)
3	Chassis Handle
4	System Fan 3
5	System Fan 2
6	System Fan 1
7	Serverboard
8	1 x Power Supply Unit (PSU)
9	Front Panel Board (FPB)

2.3 System Front Panel



No.	Description
1	Control Panel Buttons and LEDs
2	I/O Shield (depends on the specification of the server board)
3	Front Vent

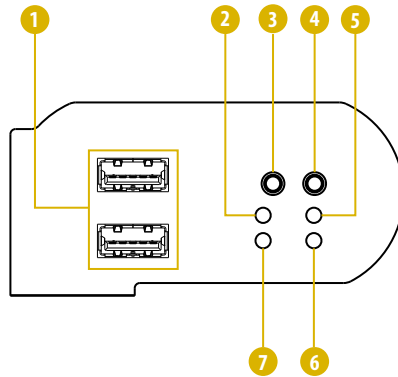
2.4 System Rear Panel



No.	Description
1	Rear Vent
2	1 x Power Supply Unit (PSU)

2.5 Front Control Panel Buttons and LEDs

Front Control Panel



No.	Description
1	USB 3.2 Gen1 Ports
2	Power LED
3	Power Button
4	System Reset Button
5	LAN1 Activity LED
6	LAN2 Activity LED
7	HDD Status LED

**Please be noted that the functions are supported depending on the type of the server board.*

System Reset Button

When the system is completely unresponsive, press the system reset button to reboot the server without shutting it off and initialize the system.

Power Button

Press the power switch button to toggle the system power on and standby/sleep modes.

To remove all power from the system completely, disconnect the power cord from the server.

Status LED Definitions

Power LED	
Status	Description
Blue	Power on
Blinking Blue	Standby(Sleep) mode
Off	Power off

System Status LED	
Status	Description
Off	Running or normal operation
Yellow	At least one sensor has critical alert

HDD Status LED	
Status	Description
Blinking Green	HDD access
Off	HDD idle

LAN1, LAN2 LED	
Status	Description
Amber	Link between system and network or no access
Blinking Amber	Network access

Chapter 3 Hardware Installation and Maintenance

This chapter helps you assemble the chassis and install components.

Before You Begin

Before you work with the server, pay close attention to the “Important Safety Instructions” at the beginning of this manual.

1. Make sure the server is powered off.

Power down the server if it is still running.

- (1) Press the Power button to power off the server from full-power mode to standby-power (sleep) mode. The Power LED at the front turns from solid green to blinking green.
- (2) Disconnect the power cord first from the AC outlet and then from the server. The power LED turns off.



The server is not completely powered down when you press the Power button on the front panel. The Power button lets the server toggle between Power On and Standby (Sleep) modes. Some internal circuitry remain active in the Standby mode. To remove all power from the system completely, be sure to disconnect the power cord from the server.

2. Ensure you have a clean and stable working environment. Avoid dust and dirt because contaminants may cause malfunctions.
3. Ground yourself properly before touching any system component. A discharge of static electricity may damage components. Wear a grounded wrist strap if available.

Installing Procedures

The followings are prerequisite to be installed.

- 2.5" or 3.5" HDD(s)
- Power Supply Unit (Pre-installed)
- System Fans (Pre-installed)
- Server Board (Pre-installed)
- HDD Backplane (Pre-installed)
- Front Panel Board (Pre-installed)



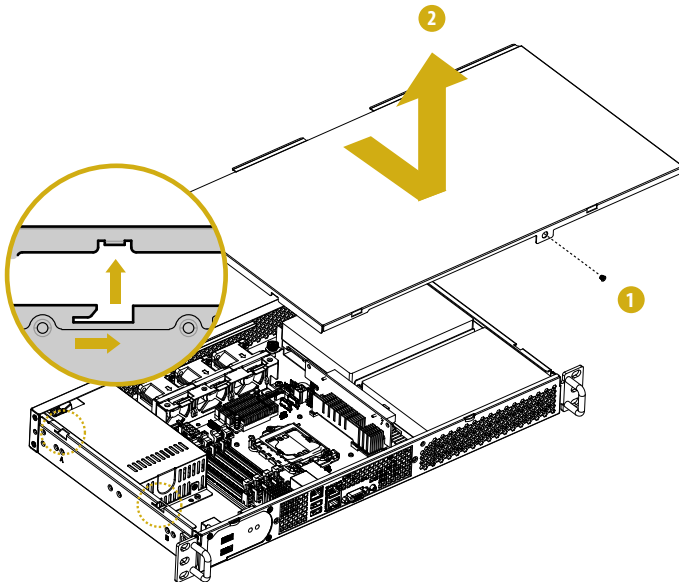
1. Some components are already pre-installed. Simply properly connect the relevant cables before or after installation. See the Quick Installation Guide for more details.
2. Refer to the user manual of the server board you use for instructions on how to install server board components.

3.1 Server Top Cover

Removing the Server Top Cover

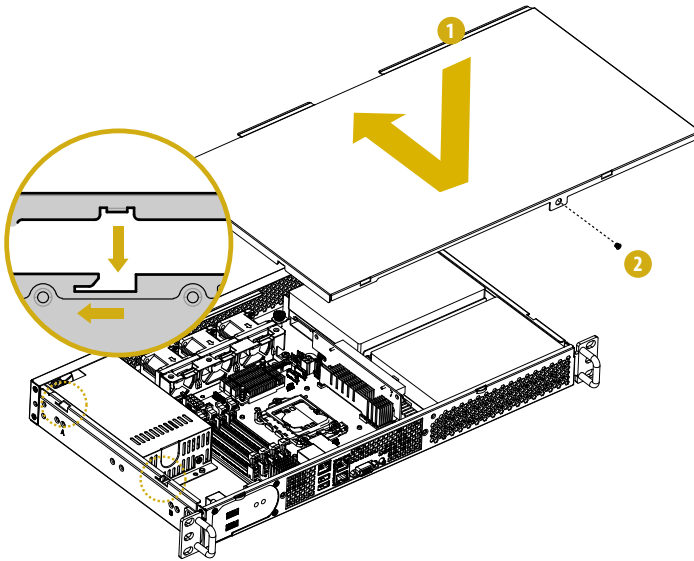


1. Before removing the top cover, power off the server and unplug the power cord.
2. The system must be operated with the chassis top cover installed to ensure proper cooling.



1. Remove the screw that secures the top cover to the chassis.
2. Push the top cover toward the front of the chassis to remove the cover from the locked position.
3. Lift up and remove the top cover.

Installing the Server Top Cover

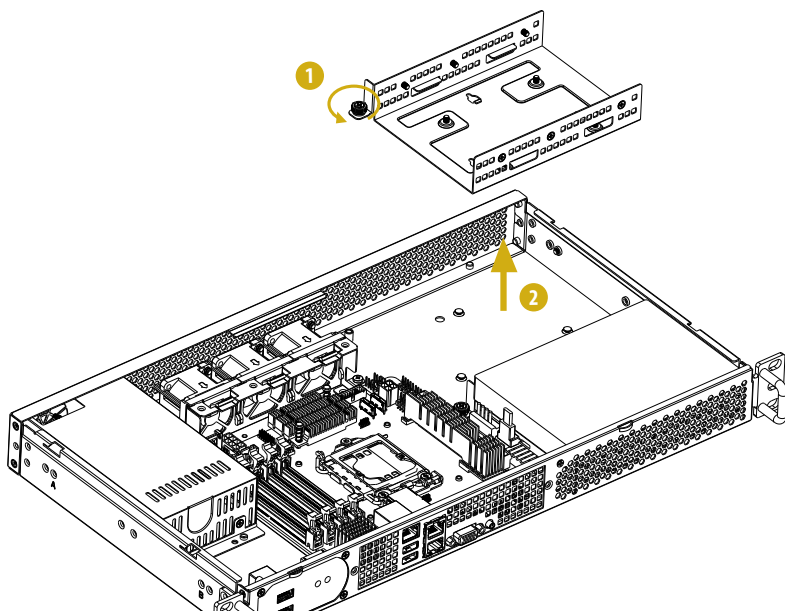


1. Lower the top cover on the chassis, making sure the side latches align with the cutouts.
2. Slide the top cover toward the rear.
3. Secure the top cover with the screw.

3.2 Hard Drive

Removing the HDD Tray

1. Hand release the thumbscrew that secures the HDD bracket to the upper tray.
2. Lift up and remove the bracket.

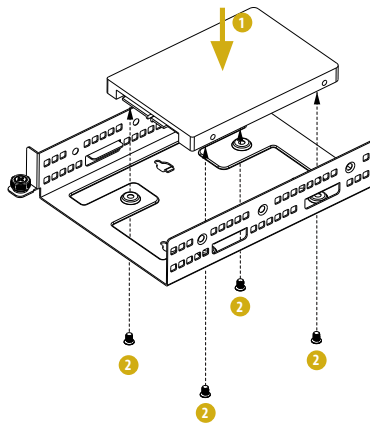


Installing the 2.5" HDD *(for HDD Tray 0 only)*



You can have both a 2.5" and a 3.5" HDD installed on the HDD Tray 0. Please install the 2.5" HDD first before installing a 3.5" HDD. See the following for detailed instructions.

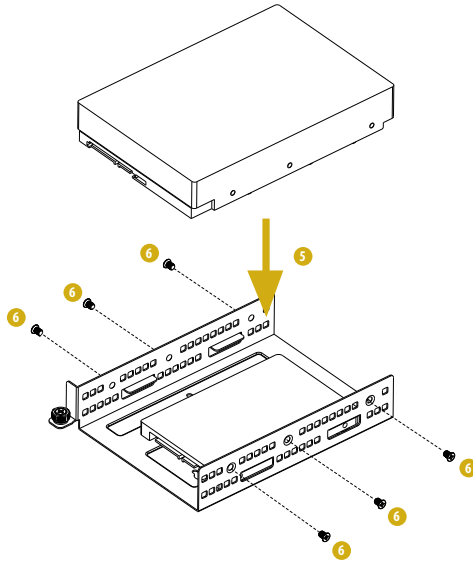
1. Place a 2.5" HDD into the bracket with the printed circuit board side facing down.
Carefully align the mounting holes in the hard drive and the bracket.
2. Secure the hard drive using the screws.



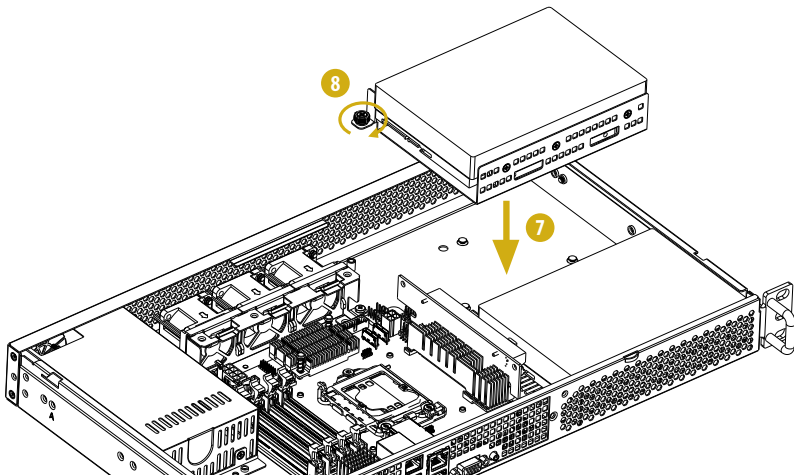
3. Lower the HDD tray into the chassis.
4. Hand tighten the thumbscrew to secure the HDD tray into place.

Installing the 3.5" HDD

1. Place a 3.5" HDD into the bracket with the printed circuit board side facing down.
Carefully align the mounting holes in the hard drive and the bracket.
2. Secure the hard drive using the screws.



3. Lower the HDD tray into the chassis.
4. Hand tighten the thumbscrew to secure the HDD tray into place.



3.3 Power Supply

Replacing the Power Supply

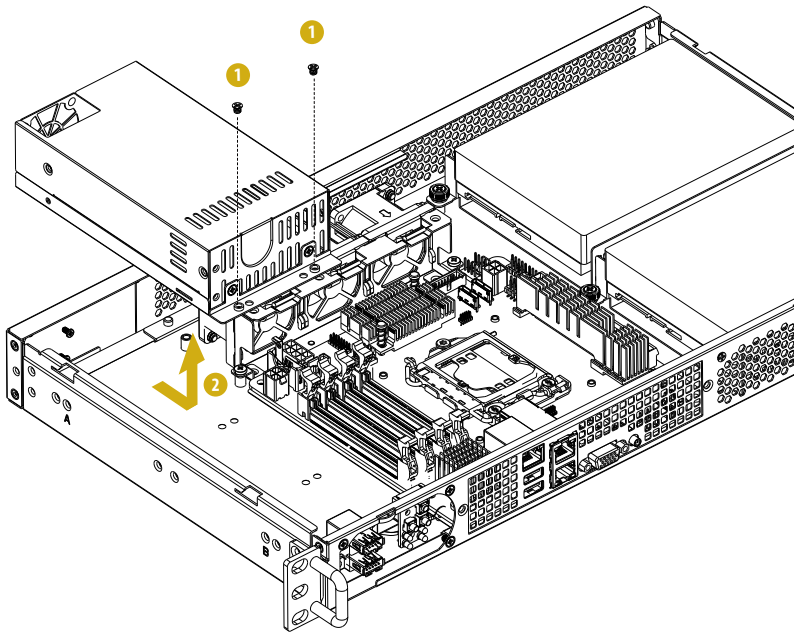


Before replacing the power supply, power off the server, unplug the power cord, and disconnect all wiring from the power supply.

Removing the Power Supply Unit

To remove a failed power supply, identify the failed power supply by checking the power supply LEDs on the PSU.

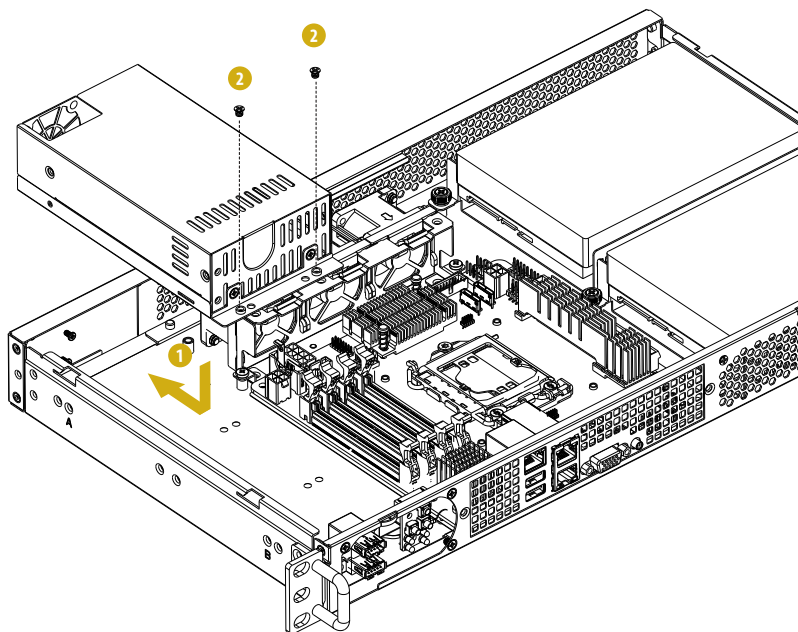
1. Release the screws securing the power supply to the chassis.
2. Push the power supply toward the front side. Then lift up and remove the failed power supply.



Installing the Power Supply Unit

To install a new power supply, please follow the steps below.

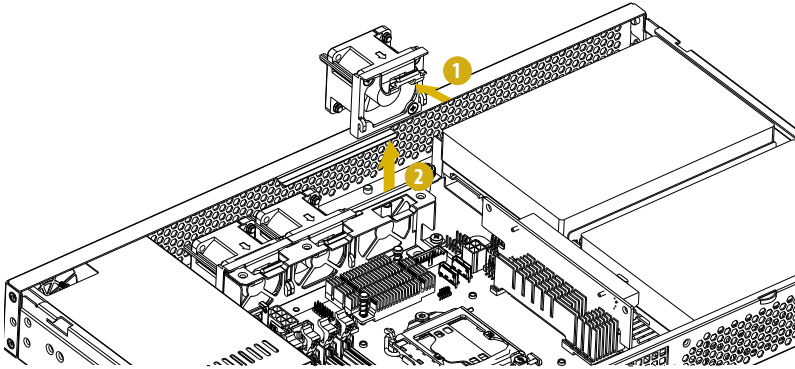
1. Lower the new power supply into the chassis. Push it toward the rear side.
2. Tighten the screws to secure the power supply into place.



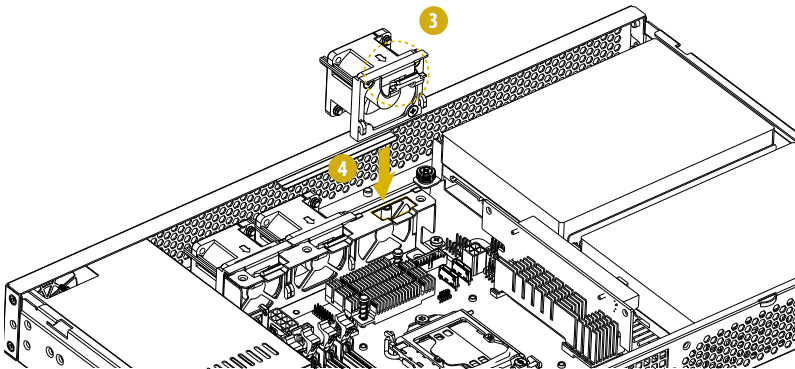
3.4 System Fan

Replacing the Simple-Swap Fan

1. Press and hold the clip on the fan.
2. Lift to remove the failed fan.



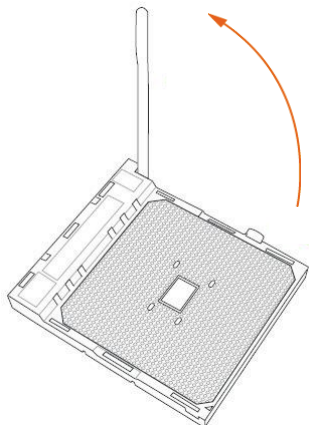
3. Align the fan clip with the mounting hole on the fan bracket. Make sure the arrow on the fan pointed to the FRONT of the chassis.
4. Gently place the fan clip into the mounting hole. Make sure the fan is well seated.



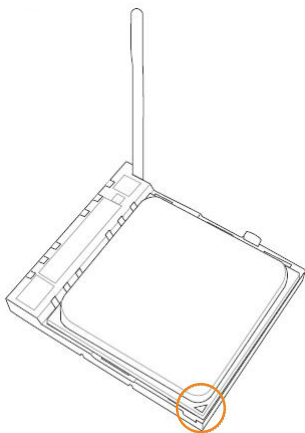
Appendix A

Installing the CPU (AMD AM4 Socket)

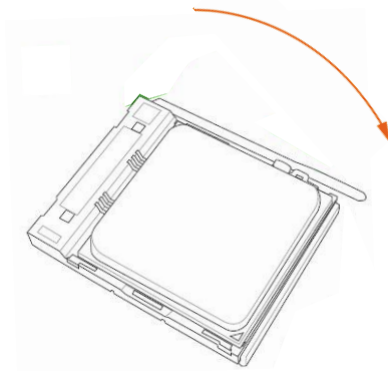
1



2

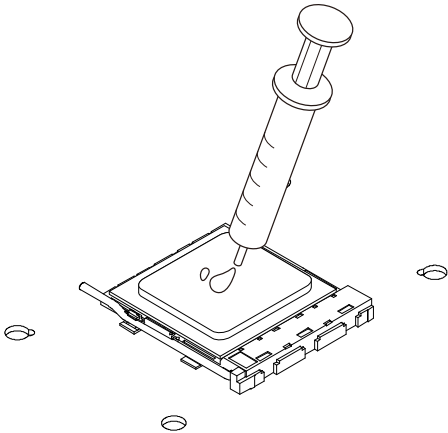


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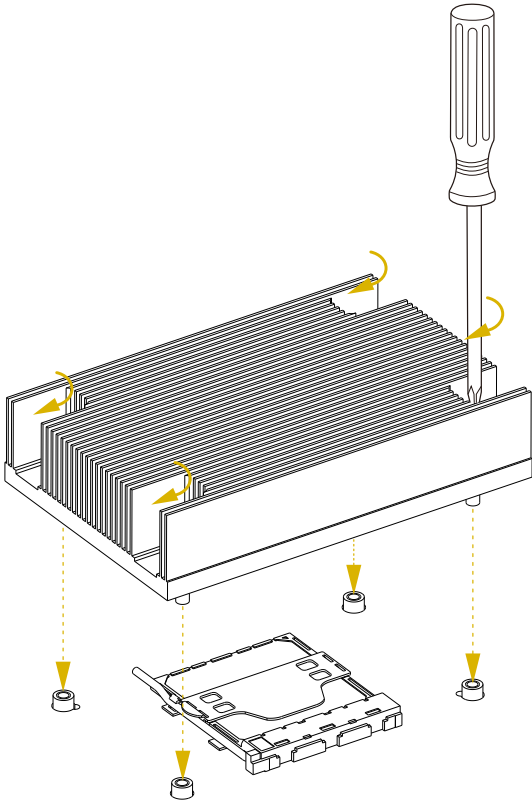


Installing the CPU Heatsink

1



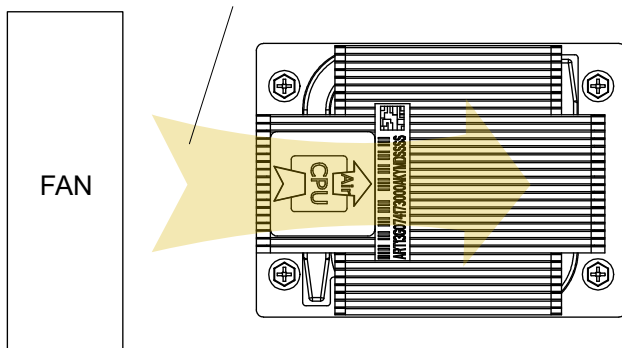
2





Please be aware of the correct direction when you install the CPU heatsink. Make sure the arrow on the CPU heatsink is pointing to the opposite side of the system fan.

Air Flow Direction

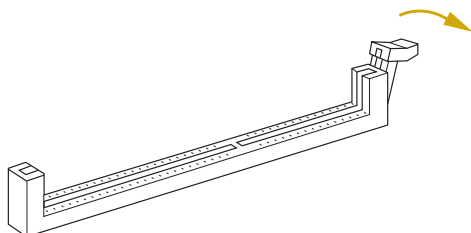


Installation of Memory Modules (DIMM)

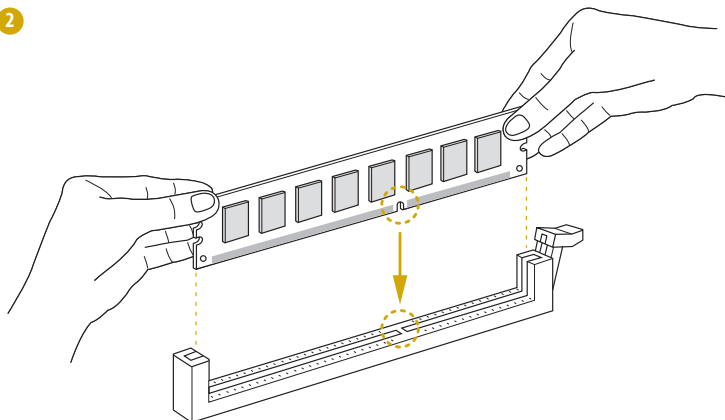


The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation. For more information about DIMM installation, please refer to the User Manual that comes with the serverboard you use.

1



2



3

