Dynatron J12

Dynatron J12 3U Active Heatsink with Heat Pipes Instruction Manual

Model: J12

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Dynatron J12 3U Active Heatsink. This heatsink is designed for AMD Genoa Processor Family, specifically for Socket SP5, and is suitable for 3U server environments and up. It features aluminum stacked fins, heat pipes, and a copper heat spreader embedded in an aluminum heatsink base, capable of supporting up to 320 Watts CPU power heat dissipation.

2. Safety Information

- Always disconnect power from the system before installing or removing any components.
- Handle the heatsink and CPU with care to avoid damage to pins or surfaces.
- Wear anti-static gloves or use an anti-static wrist strap when handling internal computer components.
- Ensure proper ventilation in the server chassis to prevent overheating.
- Keep out of reach of children.

3. Package Contents

Verify that the following items are included in your package:

- Dynatron J12 3U Active Heatsink with integrated fan.
- Mounting hardware (pre-attached or separate, depending on specific packaging).
- Thermal interface material (TIM) (pre-applied or in a separate tube).

If any items are missing or damaged, please contact your vendor.

4. Setup and Installation

Follow these steps to properly install the Dynatron J12 heatsink onto your AMD SP5 processor.

1. **Prepare the Motherboard:** Ensure the motherboard is securely mounted in the server chassis. Locate the CPU socket (AMD SP5).
2. **Prepare the CPU:** If not already installed, carefully place the AMD Genoa processor into the SP5 socket according to the motherboard manufacturer's instructions. Secure the CPU retention mechanism.
3. **Apply Thermal Paste:** If thermal paste is not pre-applied to the heatsink base, apply a small, pea-sized amount of high-quality thermal paste to the center of the CPU's integrated heat spreader (IHS). Do not spread it manually; the pressure from the heatsink will distribute it evenly.
4. **Position the Heatsink:** Carefully align the Dynatron J12 heatsink with the mounting holes around the CPU socket. Ensure the heatsink base makes full contact with the CPU's IHS.
5. **Secure the Heatsink:** Gently press down on the heatsink and secure it using the provided mounting screws or clips. Tighten screws in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) to ensure even pressure. Do not overtighten.
6. **Connect the Fan:** Locate the CPU fan header on your motherboard. Connect the 4-pin fan connector from the Dynatron J12 heatsink to this header. Ensure the connector is fully seated.

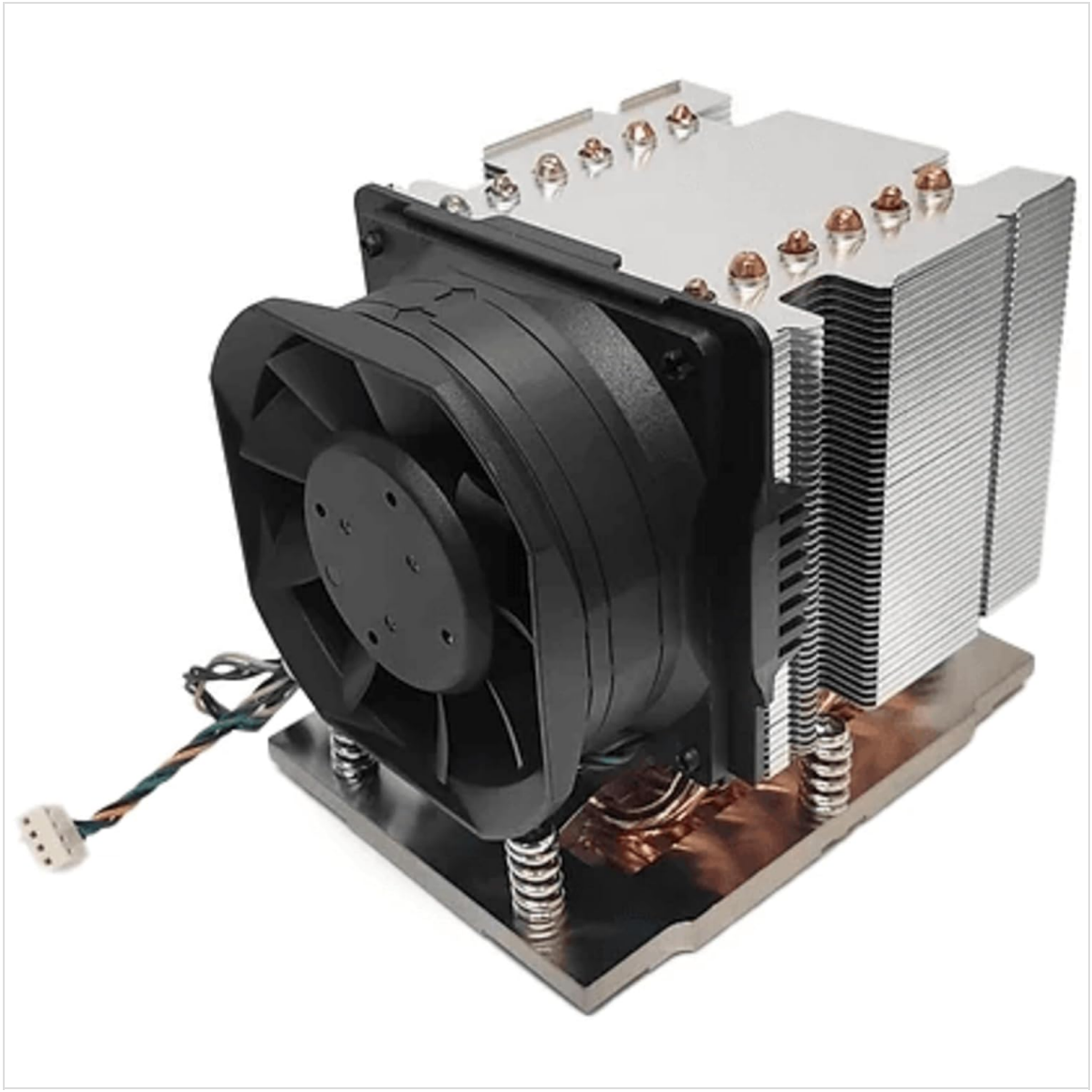

Figure 1: Main view of the Dynatron J12 heatsink, showing the fan, aluminum fins, and heat pipes.

Figure 2: Front view of the Dynatron J12 heatsink, highlighting the fan and its connection cable.

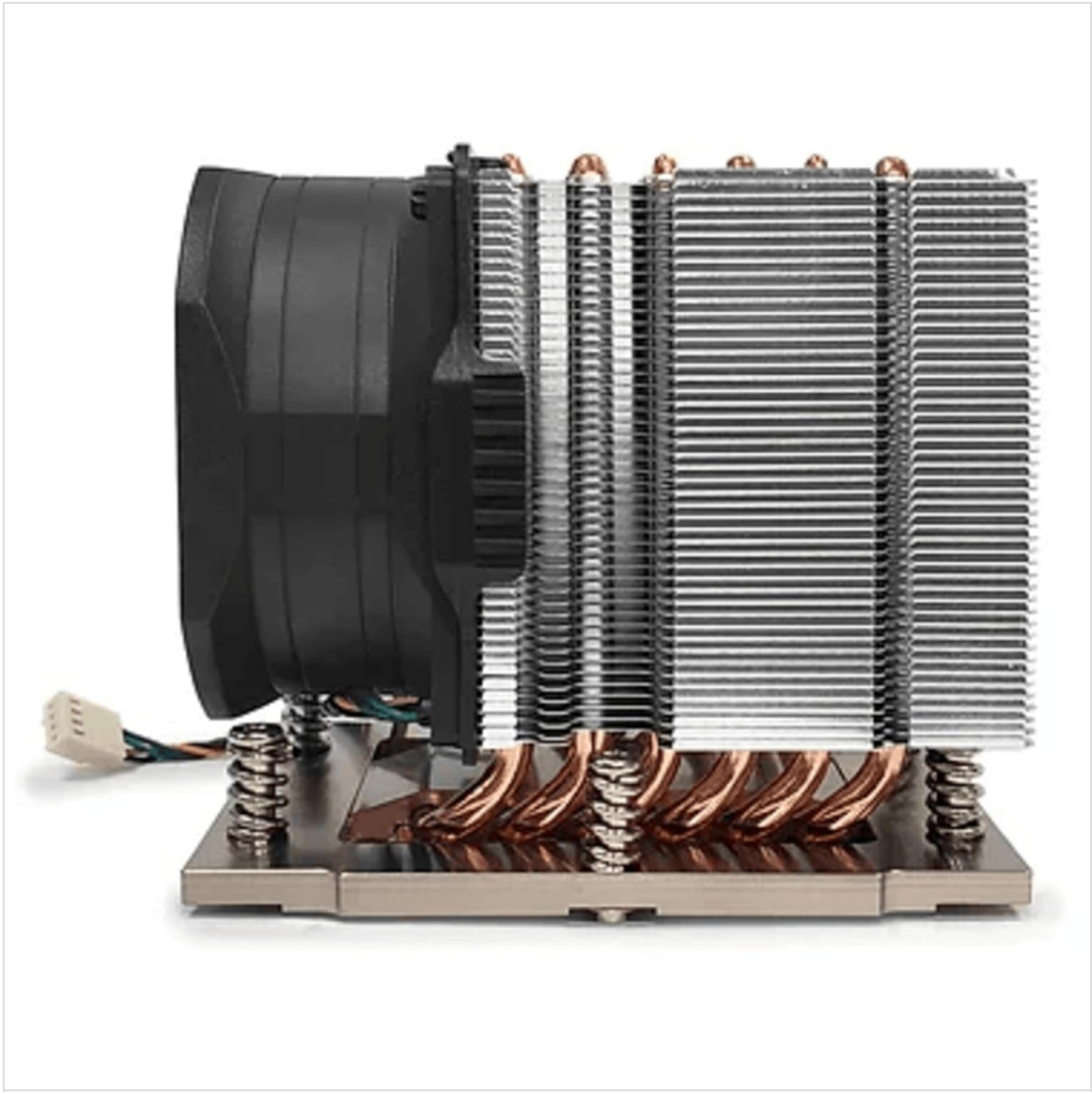

Figure 3: Side view of the Dynatron J12 heatsink, illustrating the heat pipes extending through the aluminum fins.

Figure 4: Bottom view of the Dynatron J12 heatsink, showing the copper heat spreader contact plate.

5. Operating Instructions

Once installed, the Dynatron J12 heatsink operates automatically to cool your CPU. The integrated fan's speed is typically controlled by the motherboard's BIOS/UEFI settings based on CPU temperature.

- **Initial Power On:** After installation, power on your system. Observe the fan to ensure it spins freely.
- **BIOS/UEFI Settings:** Access your motherboard's BIOS/UEFI to verify that the CPU fan is detected and operating correctly. You may adjust fan speed curves if your motherboard supports it, though default settings are usually sufficient.
- **Temperature Monitoring:** Use system monitoring software to keep an eye on CPU temperatures, especially during initial operation and under load, to ensure effective cooling.

6. Maintenance

Regular maintenance helps ensure optimal performance and longevity of your heatsink.

- **Dust Removal:** Periodically (e.g., every 3-6 months, depending on environment) inspect the heatsink fins and fan blades for dust accumulation. Use compressed air to gently blow dust away from the fins and fan. Hold the fan blades stationary while using compressed air to prevent over-spinning and potential damage to the bearing.
- **Fan Inspection:** Check the fan for any signs of wear, unusual noise, or reduced rotational speed. Ensure the fan cable remains securely connected.
- **Thermal Paste:** The thermal paste typically lasts for several years. If you notice consistently high CPU temperatures, consider reapplying thermal paste. This involves carefully removing the heatsink, cleaning off old thermal paste from both the CPU and heatsink base, and applying new thermal paste.

7. Troubleshooting

If you encounter issues with your Dynatron J12 heatsink, refer to the following common problems and solutions:

- **Fan Not Spinning:**
  - Check if the fan cable is securely connected to the CPU fan header on the motherboard.
  - Verify fan settings in the motherboard's BIOS/UEFI. Ensure fan control is enabled.
  - Inspect for any physical obstructions preventing the fan blades from rotating.
- **High CPU Temperatures:**
  - Ensure the heatsink is properly seated and making full contact with the CPU. Re-tighten mounting screws if necessary.
  - Check for excessive dust buildup on the heatsink fins and fan. Clean as described in the Maintenance section.
  - Verify that thermal paste was applied correctly and is not dried out. Reapply if needed.
  - Ensure adequate airflow within the server chassis.
- **Unusual Fan Noise:**
  - Check for loose cables or other components touching the fan blades.
  - Dust accumulation can cause imbalance; clean the fan.
  - If the noise persists and is a grinding or rattling sound, the fan bearing may be failing. Consider replacing the fan.

8. Specifications

Feature	Specification

CPU Support	AMD Genoa Processor Family
CPU Socket	Socket SP5
Solution	3U Server and Up
Dimensions (H x W x D)	118.0 x 92.4 x 105.0 mm (4.6"L x 3.6"W x 4.1"H)
Material	Aluminum Fin + Heat pipes + Copper Heat Spreader Embedded Aluminum Heatsink Base
Max CPU Power Dissipation	Up to 320 Watts
Fan Bearing Type	Double Ball
Rated Voltage	12V
Fan Speed (20% Duty Cycle)	2400 ± 200 RPM
Fan Speed (50% Duty Cycle)	4800 ± 10% RPM
Fan Speed (100% Duty Cycle)	8000 ± 10% RPM
Air Flow (20% Duty Cycle)	32.52 CFM
Air Flow (50% Duty Cycle)	67.24 CFM
Air Flow (100% Duty Cycle)	115.61 CFM
Noise Level (20% Duty Cycle)	25.63 dBA
Noise Level (50% Duty Cycle)	47.85 dBA
Noise Level (100% Duty Cycle)	64.40 dBA
Air Pressure (20% Duty Cycle)	1.39 mmH2O
Air Pressure (50% Duty Cycle)	5.97 mmH2O
Air Pressure (100% Duty Cycle)	34.06 mmH2O
Item Weight	798 Grams (1.76 Pounds)

9. Warranty and Support

Dynatron products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty information provided with your purchase or visit the official Dynatron website. In case of technical issues or questions not covered in this manual, please contact your retailer or Dynatron customer support for assistance.