

Thermalright Assassin X 120R

Thermalright Assassin X 120R Digital Black CPU Cooler Instruction Manual

Model: **Assassin X 120R Digital Black** | Brand: **Thermalright**

INTRODUCTION

The Thermalright Assassin X 120R Digital Black is a high-performance CPU air cooler designed to provide efficient thermal management for your computer's processor. It features a digital display for real-time monitoring of CPU and GPU parameters, advanced AGHP heat pipe technology, and a high-speed PWM fan. This manual provides essential information for the proper installation, operation, and maintenance of your CPU cooler.

PACKAGE CONTENTS

Please verify that all components are present in the package before proceeding with installation.

- Thermalright Assassin X 120R Digital Black CPU Cooler (Heatsink with integrated digital display and fan)
- Installation accessories (mounting brackets, screws, spacers for various sockets)
- Thermal paste

SETUP AND INSTALLATION

This section guides you through the installation process. Ensure your system is powered off and unplugged before beginning. Refer to your motherboard manual for specific instructions on CPU cooler installation points.

Compatibility

The Assassin X 120R Digital Black CPU Cooler is compatible with the following CPU sockets:

- **Intel:** LGA 1851, LGA 1700, LGA 1150, LGA 1151, LGA 1155, LGA 1156, LGA 1200
- **AMD:** AM4, AM5

Note: For AMD platform installation, the original motherboard backplate is required.

General Installation Steps

1. **Prepare the Motherboard:** Identify the correct mounting brackets for your CPU socket (Intel or AMD). Remove any existing CPU cooler and clean the CPU surface of old thermal paste using isopropyl alcohol.
2. **Apply Thermal Paste:** Apply a small amount of thermal paste (included) to the center of the CPU's integrated heat spreader (IHS). A pea-sized dot is usually sufficient.
3. **Install Mounting Hardware:** Attach the appropriate backplate (if required for Intel) and standoffs to the motherboard. Secure the mounting arms to the standoffs.
4. **Position the Cooler:** Carefully place the heatsink onto the CPU, aligning the mounting holes on the cooler with the mounting arms.
5. **Secure the Cooler:** Use the provided screws to secure the heatsink to the mounting arms. Tighten screws in a diagonal pattern until snug, but do not overtighten.
6. **Connect Fan and Digital Display Cables:**
 - Connect the 4-pin PWM fan cable to the CPU_FAN header on your motherboard.
 - Connect the digital display cable to an available USB 2.0 header on your motherboard.



Figure 1: Overview of the Thermalright Assassin X 120R Digital Black CPU Cooler.

REFRIGERACIÓN DE LA CPU CON FACILIDAD



HEATPIPES AGHP DE ÚLTIMA GENERACIÓN
Y VENTILADOR DE ALTO RENDIMIENTO



Diseño de aleta optimizado



Soporte RGB direccionable



Figure 2: Dimensions of the Assassin X 120R Digital Black CPU Cooler, showing height, width, and depth.

TECNOLOGÍA AGHP

Equipado con Heatpipes Anti-Gravity para garantizar un rendimiento similar en la dirección de instalación del disipador, tanto horizontal como vertical.

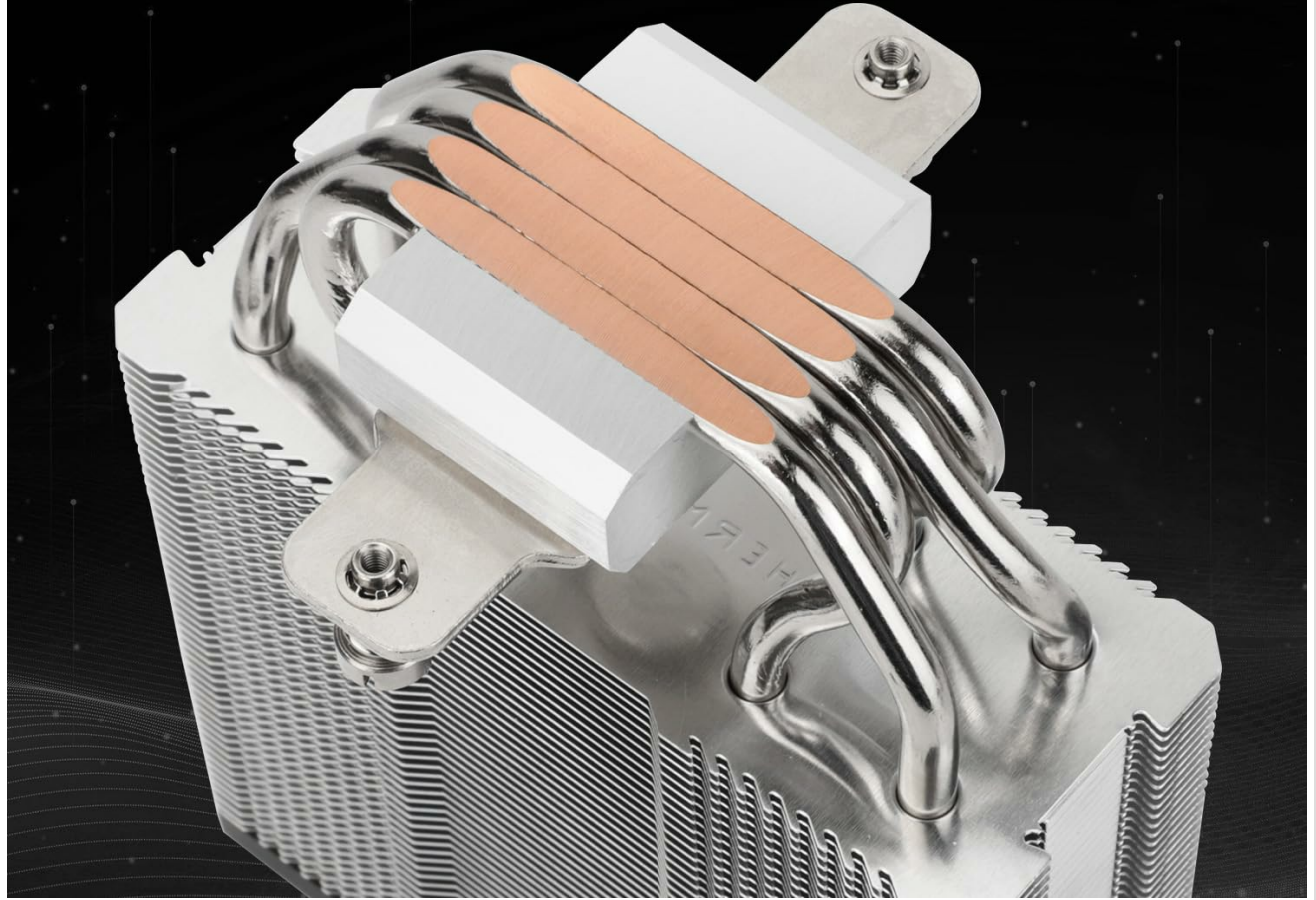


Figure 3: Close-up view of the AGHP (Anti-Gravity Heat Pipe) technology, highlighting the 4x6mm heat pipes for efficient heat transfer.

Assassin X 120 R DIGITAL BLACK DIMENSIÓN



Figure 4: Dimensions of the TL-P12 120mm PWM fan, measuring 120x120x25mm.

OPERATING INSTRUCTIONS

The Assassin X 120R Digital Black features a digital display and a PWM controlled fan for optimal performance.

Digital Display Functionality

The integrated digital screen provides real-time monitoring of critical system parameters. With the **TRCC software**, you can customize the display to show:

- CPU Temperature
- CPU Utilization
- Graphics Card Temperature
- Graphics Card Utilization

This allows for easy access to system information at a glance. The display's color can also be adjusted via the TRCC software, potentially changing based on temperature or usage.

DIGITALE EXZELLENZ

Der digitale Assassin X-Kühler zeigt die Temperatur und den Verbrauch der CPU oder Grafikkarte auf einem Digitalisierungsfeld an und ermöglicht so einen einfachen Zugriff auf Systeminformationen.



Figure 5: Close-up of the digital display showing CPU temperature and usage.

ADRESSIERBARE DIGITALE RGB-ÜBERWACHUNG

Die Digitalanzeige unterstützt die adressierbare RGB-Anpassung über die TRCC-Software. Die Farbe der Digitalanzeigen ändert sich automatisch mit den Temperaturen oder der Verwendung und zeigt den Zustand des Systems direkt an (Wird in der TRCC-Software unterstützt)

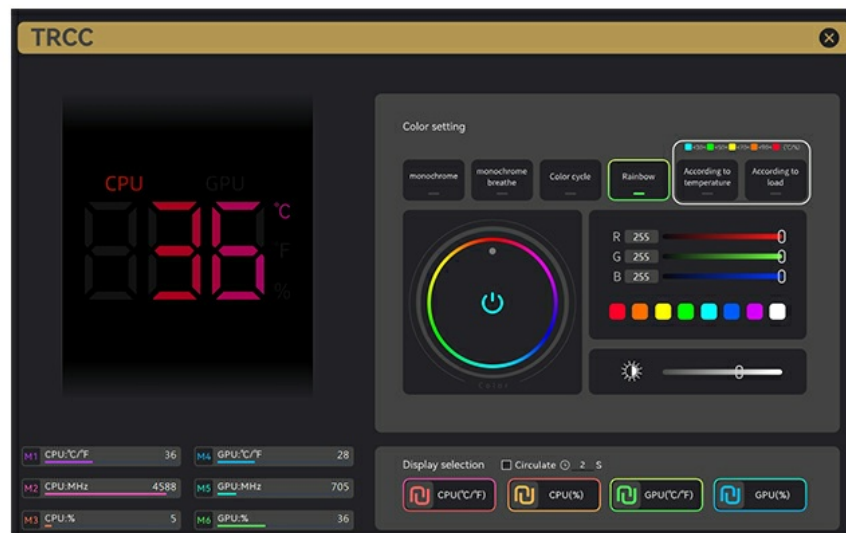


Figure 6: Example of the TRCC software interface for customizing the digital display.

PWM Fan Control

The 120mm PWM fan automatically adjusts its speed (up to 2000 RPM) based on the CPU temperature, as controlled by your motherboard's fan headers. This ensures optimal cooling performance while minimizing noise levels. No manual adjustment is typically required for fan speed.

MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your CPU cooler.

- **Dust Cleaning:** Periodically (e.g., every 3-6 months), power off your computer and use compressed air to remove dust accumulation from the heatsink fins and fan blades. Hold the fan blades gently to prevent over-spinning during cleaning.
- **Fan Inspection:** Check the fan for any signs of wear, damage, or unusual noise. Ensure the fan cable is securely connected.
- **Thermal Paste:** While not frequently required, if you remove the cooler or notice significantly higher temperatures over time, consider reapplying fresh thermal paste.

TROUBLESHOOTING

If you encounter issues with your CPU cooler, refer to the following common troubleshooting steps:

- **Fan Not Spinning:**
 - Ensure the 4-pin PWM fan cable is securely connected to the CPU_FAN header on the motherboard.
 - Check BIOS/UEFI settings to ensure the CPU fan control is enabled and configured correctly.
- **High CPU Temperatures:**
 - Verify that the cooler is properly seated on the CPU and that mounting screws are tightened evenly.
 - Confirm that thermal paste was applied correctly and is making good contact.
 - Clean any dust accumulation from the heatsink fins and fan.
 - Ensure adequate airflow within your PC case.
- **Digital Display Not Working/Incorrect Readings:**
 - Check if the USB 2.0 header cable for the display is securely connected to both the cooler and the motherboard.
 - Install or update the TRCC software from the Thermalright official website.
 - Ensure the TRCC software is running in the background.

SPECIFICATIONS

Feature	Specification
Model	Assassin X 120R Digital Black
Dimensions (L x W x H)	120mm x 71mm x 151mm
Heatsink Material	Aluminum
Heat Pipes	4 x 6mm (AGHP Technology)
Fan Dimensions	120mm x 120mm x 25mm
Fan Speed	2000 RPM \pm 10% (PWM Controlled)
Airflow	70.84 CFM
Static Pressure	2.63 mm H2O

Feature	Specification
Noise Level	≤ 29.8 dB(A)
Fan Connector	4-pin PWM
Rated Voltage	12V DC
Compatible Sockets	Intel LGA 1851/1700/1150/1151/1155/1156/1200; AMD AM4/AM5
Digital Display	Yes, with TRCC software support

WARRANTY INFORMATION

Thermalright products are manufactured to high-quality standards. For specific warranty terms and conditions, including duration and coverage, please refer to the official Thermalright website or contact your retailer. Keep your proof of purchase for warranty claims.

SUPPORT

For technical support, driver downloads (such as the TRCC software), or additional product information, please visit the official Thermalright website. You may also contact your point of purchase for assistance.

Official Thermalright Website: www.thermalright.com