darkFlash E400 Plus

darkFlash E400 Plus CPU Air Cooler Instruction Manual

Model: E400 Plus

Brand: darkFlash

INTRODUCTION

The darkFlash E400 Plus is a high-performance CPU air cooler designed to provide efficient thermal management for your computer's processor. It features four copper heat pipes, dual 120mm PWM ARGB fans, and a real-time LED digital temperature display. This manual provides detailed instructions for installation, operation, and maintenance.

PACKAGE CONTENTS

Before beginning installation, verify that all components are present.

- E400 Plus CPU Cooler with pre-installed fans
- Intel mounting brackets
- AMD mounting brackets
- Backplate (universal or specific)
- Mounting screws and standoffs
- Thermal paste
- Fan power/ARGB cables
- User Manual (this document)

EXPLORE SERIES
E400 PLUS
DUAL FAN TOWER CPU COOLER

Image: The darkFlash E400 Plus CPU cooler and its included accessories, such as mounting brackets for Intel and AMD, screws, and a tube of thermal paste.
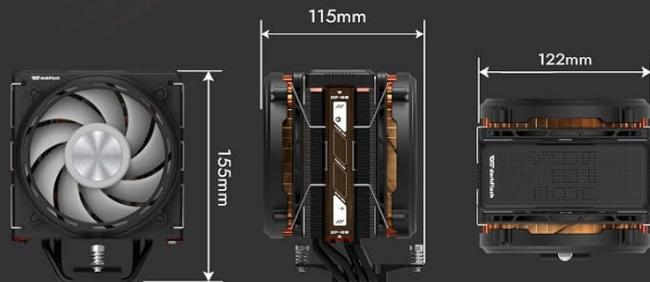
SPECIFICATIONS

Feature	Specification
Model	E400 Plus
Dimensions (L x W x H)	15.5L x 12.2W x 11.4H Centimeters
TDP Support	235 Watts
Cooling Method	Air
Fan Size	Dual 120mm
Fan Speed (Regular)	800-1800 ±10% RPM

Fan Speed (Reverse)	800-2100 ±10% RPM
Max Rotational Speed	2200 RPM
Air Flow Capacity	50.18 CFM
Noise Level	37.1 dBA (Max)
Bearing Type	Hydro Bearing
Service Life	40,000 hours
Compatible Sockets	Intel LGA1851/1700/1200/115X/1366, AMD AM5/AM4
Material	Metal, Plastic

ENGINEERED FINS FOR IMPROVED COOLING

Fin structure engineered for superior thermal performance.

122*155*115mm
Overall Dimensions

50
Fin Count

122*50*0.3mm
Fin Dimensions

235w
TDP

Image: Diagram showing the overall dimensions of the darkFlash E400 Plus CPU cooler (122x155x115mm) and its fin structure, highlighting its 235W TDP capacity.

INSTALLATION GUIDE

This section outlines the general installation process. Specific steps may vary slightly depending on your motherboard and CPU socket type. Refer to your motherboard manual for additional guidance.

1. Prepare Your System

1. Power off your computer and disconnect all cables.
2. Open your computer case.
3. Remove any existing CPU cooler. Clean the CPU surface thoroughly to remove old thermal paste using isopropyl alcohol and a lint-free cloth.

2. Install Backplate (Intel/AMD)

Identify the correct backplate and mounting screws for your CPU socket (Intel LGA1851/1700/1200/115X/1366 or AMD AM5/AM4).

1. Position the backplate on the rear side of the motherboard, aligning the holes with the CPU socket mounting holes.
2. From the front side of the motherboard, insert the appropriate standoffs through the mounting holes and secure them to the backplate.

3. Apply Thermal Paste

Apply a small, pea-sized amount of thermal paste to the center of your CPU's Integrated Heat Spreader (IHS). Do not spread it manually; the pressure from the cooler will distribute it evenly.

4. Mount the Cooler

1. Carefully place the E400 Plus cooler onto the CPU, aligning the mounting holes on the cooler's base with the standoffs.
2. Secure the cooler using the provided mounting screws. Tighten screws in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) until snug. Do not overtighten.
3. The front fan can be removed for easier installation if needed, then reattached.

5. Connect Fans and ARGB

The E400 Plus features a 7-pin connector for simplified cable management.

1. Connect the 7-pin cable from the cooler to the designated header on your motherboard or ARGB controller. This cable typically handles both fan power (PWM) and ARGB lighting.
2. Ensure the connection is secure.

Image: The darkFlash E400 Plus CPU cooler with its dual fans and LED display, ready for installation.

OPERATION

Real-Time LED Digital Display

The top of the E400 Plus features a pixel-style LED display that shows your CPU temperature in real-time. This display can show temperatures in both Celsius and Fahrenheit.

Image: Close-up of the darkFlash E400 Plus's top LED display showing "CPU 27°C" and an example of Fahrenheit display.

ARGB Lighting Control

The dual 120mm fans feature Addressable RGB (ARGB) lighting.

Image: The darkFlash E400 Plus fans showcasing vibrant, colorful ARGB lighting effects, compatible with various motherboard sync technologies.

1. If connected to an ARGB header on your motherboard, you can control the lighting effects using your motherboard's RGB software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, GIGABYTE RGB Fusion, ASRock Polychrome RGB).
2. If connected to a dedicated ARGB controller (not included), refer to the controller's manual for lighting adjustments.

PWM Fan Control

The fans are Pulse Width Modulation (PWM) controlled, allowing your motherboard to dynamically adjust fan speed based on CPU temperature. This optimizes cooling performance while minimizing noise.

HIGH-EFFICIENCY PWM FANS

Hydro bearing equipped Lower friction coefficient creates lower noise levels and longer life time

800-1800 ±10%RPM

Regular Fan Speed

800-2100 ±10%RPM

Reverse Fan Speed

37.10 dBA(Max)

Noise Level

40000 h

Service life

Reverse Fan   **Regular Fan**

Image: Details of the high-efficiency PWM fans, showing regular and reverse fan speeds, noise level (37.1 dBA Max), and a service life of 40,000 hours.
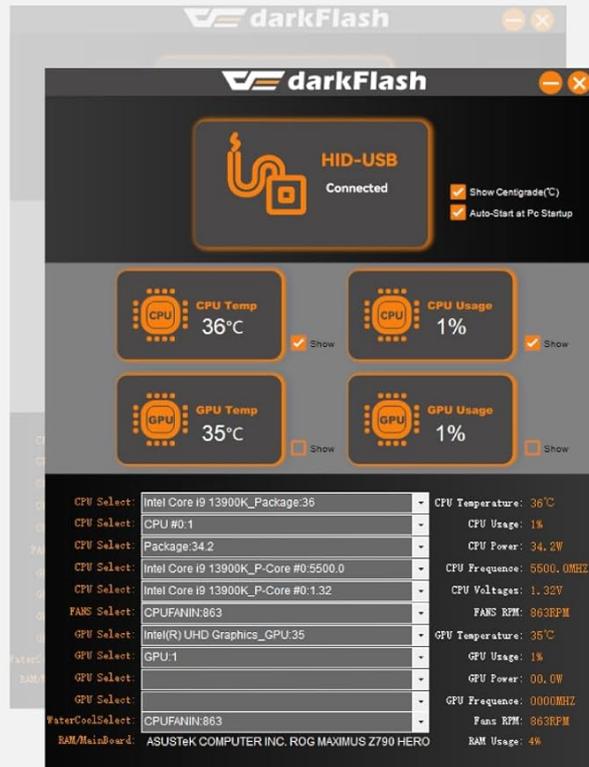
1. Ensure the 7-pin connector is properly connected to a CPU_FAN or similar header on your motherboard.
2. Adjust fan curves in your motherboard's BIOS/UEFI settings for optimal performance and acoustics.

Intelligent Control Software

darkFlash provides optional software for enhanced control over the LED display and monitoring.

INTELLIGENT CONTROL SOFTWARE

Choose from a set of built-in data options to display on the matrix LED top cover.Select the data source, adjust the display units, and enable automatic data rotation with a simple, streamlined interface.

Image: Screenshot of the darkFlash intelligent control software, displaying CPU temperature, usage, and other system information, with options to select data to display on the cooler's LED screen.

1. Download the software from the official darkFlash website:https://www.darkflash.com/driver
2. Install the software and follow the on-screen instructions.
3. Use the software to customize the LED display, monitor system parameters, and potentially adjust fan settings.

MAINTENANCE

Cleaning the Cooler

Regular cleaning helps maintain optimal cooling performance.

1. Power off your computer and disconnect it from the power source.
2. Carefully remove the fans from the heatsink.
3. Use compressed air to blow dust out of the heatsink fins. Hold the can upright and use short bursts.
4. Clean fan blades with a soft cloth or cotton swab.
5. Reattach the fans securely.

Frequency: Clean every 3-6 months, or more frequently in dusty environments.

Thermal Paste Reapplication

Thermal paste can degrade over time. Reapplying it every few years can improve thermal transfer.

1. Follow steps 1-3 from the "Prepare Your System" section of the Installation Guide.
2. Clean off old thermal paste from both the CPU and the cooler's base.
3. Apply new thermal paste as described in the "Apply Thermal Paste" section.
4. Reinstall the cooler.

TROUBLESHOOTING

High CPU Temperatures

- **Check Thermal Paste:** Ensure thermal paste was applied correctly and is not dried out. Reapply if necessary.
- **Verify Cooler Mounting:** Confirm the cooler is securely mounted and making good contact with the CPU.
- **Fan Operation:** Check if both fans are spinning. Ensure fan cables are properly connected to the motherboard.
- **Airflow:** Ensure proper airflow within your PC case.

Fans Not Spinning or ARGB Not Lighting Up

- **Cable Connections:** Verify the 7-pin connector is securely plugged into the correct header on the motherboard or ARGB controller.
- **Motherboard Settings:** Check your motherboard's BIOS/UEFI settings to ensure fan headers are enabled and ARGB headers are configured correctly.
- **Software Conflict:** If using multiple RGB software, they might conflict. Try uninstalling other RGB software or using only one.

LED Display Not Working

- **Cable Connection:** Ensure the 7-pin connector is fully seated.
- **Software:** If using the darkFlash control software, ensure it is installed correctly and running. Check for updates.
- **Power:** Verify the cooler is receiving adequate power.

WARRANTY AND SUPPORT

The darkFlash E400 Plus CPU Air Cooler comes with a manufacturer's warranty. Please refer to the warranty card included with your product or visit the official darkFlash website for detailed warranty terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact darkFlash customer service through their official website: https://www.darkflash.com

When contacting support, please have your product model (E400 Plus) and proof of purchase ready.