

darkFlash E400

darkFlash E400 CPU Air Cooler Instruction Manual

Model: E400

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your darkFlash E400 CPU Air Cooler. The E400 features a digital display, ARGB PWM fan, and is designed for efficient cooling of Intel and AMD CPUs in compact builds. Please read this manual thoroughly before installation and use to ensure proper functionality and safety.

SAFETY INFORMATION

- Ensure your computer system is powered off and unplugged from the wall outlet before beginning installation.
- Handle components with care to avoid damage. Static electricity can harm electronic components; consider using an anti-static wrist strap.
- Keep small parts and packaging materials away from children.
- Do not attempt to modify the cooler or its components. Unauthorized modifications may void your warranty and pose safety risks.
- Refer to your motherboard and CPU manuals for additional compatibility and installation guidelines.

PACKAGE CONTENTS

Verify that all components are present in the package before proceeding with installation:

- darkFlash E400 CPU Air Cooler (Heatsink with pre-attached fan)
- Mounting Brackets for Intel (LGA1851/1700/1200/115X)
- Mounting Brackets for AMD (AM5/AM4)
- Backplate (Universal)
- Mounting Screws and Spacers
- Thermal Paste



EXPLORE SERIES

E400

TOWER CPU COOLER



Image: Contents of the darkFlash E400 package, including the cooler, mounting hardware, and thermal paste.

SETUP AND INSTALLATION

The darkFlash E400 CPU Air Cooler is compatible with Intel LGA1851/1700/1200/115X and AMD AM5/AM4 sockets. Follow these general steps for installation. For a visual guide, please refer to the installation video below.

General Installation Steps:

1. **Prepare Motherboard:** Remove any existing CPU cooler and clean off old thermal paste from the CPU surface.
2. **Install Backplate:** Position the universal backplate on the rear of your motherboard, aligning it with the CPU socket holes.
3. **Attach Mounting Brackets:** Secure the appropriate Intel or AMD mounting brackets to the front of the motherboard using the provided screws and spacers.
4. **Apply Thermal Paste:** Apply a small, pea-sized amount of thermal paste to the center of your CPU's integrated heat spreader (IHS).

5. **Mount Cooler:** Carefully place the E400 heatsink onto the CPU, aligning the mounting holes on the cooler with the standoffs on the brackets. Tighten the screws in a diagonal pattern until snug, ensuring even pressure.
6. **Connect Fan and ARGB Cables:** Connect the 4-pin PWM fan cable to the CPU_FAN header on your motherboard. Connect the 3-pin ARGB cable to a compatible 5V ARGB header on your motherboard.
7. **Connect USB Cable for Digital Display:** Connect the USB 2.0 cable from the cooler to an available USB 2.0 header on your motherboard.

Note: The E400 is designed for compact Micro-ATX gaming layouts. Due to shorter cable lengths in some batches, it is not recommended for full-sized ATX cases.

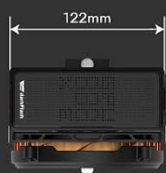
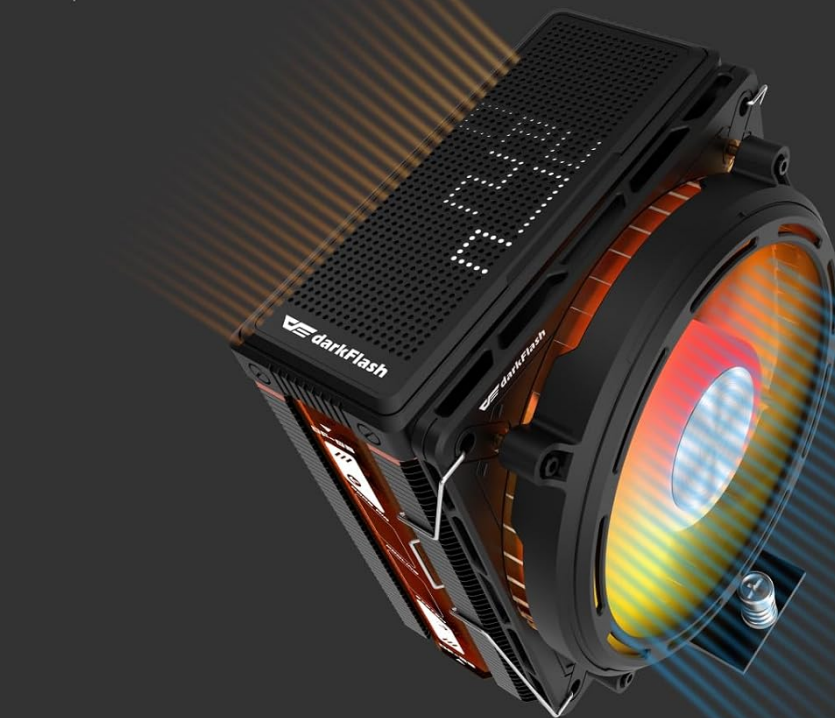
Installation Video Guide:

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Video: Official darkFlash E400 CPU Cooler installation guide. This video demonstrates the physical mounting process and cable connections for the cooler.

ENGINEERED FINS FOR IMPROVED COOLING

Fin structure engineered for superior thermal performance.



122*155*92mm
Overall Dimensions

122*50*0.3mm
Fin Dimensions

50
Fin Count

230w
TDP

Image: Detailed view of the darkFlash E400 cooler, showing its dimensions and fin structure for improved cooling performance.

OPERATING INSTRUCTIONS

Digital Display Functionality:

The darkFlash E400 features an integrated pixel-style LED digital display on its top cover. This display provides real-time system monitoring information. By default, it may show CPU temperature. The display supports both Celsius and Fahrenheit units.



Image: The digital display on the darkFlash E400 cooler showing real-time CPU temperature.

TOP CPU TEMPERATURE DISPLAY COVER

A dot-matrix display on the top cover shows real-time CPU temperature in clear, pixel-style digits.



*Supporting both
Celsius and Fahrenheit.*



Image: The E400's digital display is capable of showing temperatures in both Celsius and Fahrenheit.

Intelligent Control Software:

To unlock the full potential of the digital display and customize its output, install the darkFlash control software. This software connects via the USB 2.0 header and allows you to:

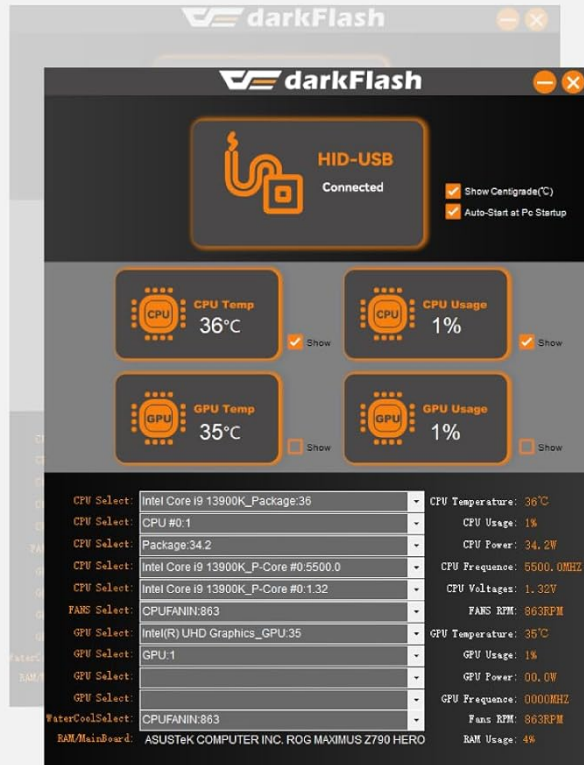
- Monitor CPU temperature, load, wattage, frequency, and voltage.
- Monitor GPU status, fan speed, and memory usage.
- Select specific data points to display.
- Enable automatic data rotation on the display.
- Set display themes.

Download the software from the official darkFlash website:

<https://www.darkflash.com/driver>

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.



SOFTWARE DOWNLOAD

<https://www.darkflash.com/driver>

 EXPLORE E400 Air CPU cooler Driver

Image: Screenshot of the darkFlash intelligent control software, showing various system monitoring options.



Image: The E400's digital display cycling through different system information themes, configurable via software.

ARGB Lighting Control:

The 120mm PWM fan features 5V 3-pin ARGB lighting. This lighting can be synchronized with compatible motherboard software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, GIGABYTE RGB Fusion 2.0, ASRock Polychrome RGB) to customize colors and effects, enhancing the aesthetic of your PC build.

DREAMY COLORFUL EFFECTS

With different ARGB effects, the light spreads from the center to all
The white fan blades provide smooth and perfect lighting



Image: The darkFlash E400 CPU cooler showcasing its customizable ARGB lighting effects.

MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your darkFlash E400 CPU Air Cooler.

- **Dust Removal:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Ensure the fan is not spinning during cleaning to prevent damage.
- **Fan Inspection:** Check the fan for any obstructions or signs of wear. If the fan becomes excessively noisy or stops spinning, it may need replacement.
- **Thermal Paste:** If you remove the cooler for any reason, it is recommended to clean off the old thermal paste from both the CPU and the cooler's base and apply fresh thermal paste before reinstallation.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Fan not spinning or making unusual noise.	Loose fan cable connection, fan obstruction, faulty fan.	Check 4-pin PWM fan cable connection to CPU_FAN header. Ensure no cables or debris are blocking the fan blades. If issues persist, contact support.
Digital display is blank or not showing correct information.	Loose USB 2.0 cable connection, software not installed or running, incorrect software settings.	Verify USB 2.0 cable is securely connected to both the cooler and motherboard header. Install the darkFlash control software and ensure it is running. Check software settings for display configuration.
ARGB lighting not working or incorrect colors.	Loose ARGB cable connection, incompatible motherboard header (e.g., 12V RGB instead of 5V ARGB), motherboard ARGB software not configured.	Ensure 3-pin ARGB cable is connected to a 5V ARGB header. Check motherboard's ARGB software for lighting settings.
High CPU temperatures.	Improper thermal paste application, loose cooler mounting, insufficient airflow in case, fan not spinning at optimal speed.	Re-apply thermal paste. Ensure cooler is securely mounted with even pressure. Check case airflow and fan speed settings in BIOS/software.

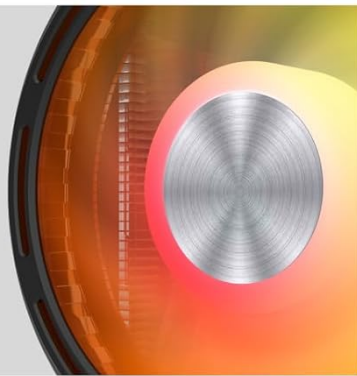
SPECIFICATIONS

Feature	Detail
Model	E400
Product Dimensions	4.8"L x 6.1"W x 3.6"H (122mm x 155mm x 92mm)
Cooling Method	Air Cooling
TDP (Thermal Design Power)	Up to 230W
Heat Pipes	4 x 6mm vacuum-plated copper heat pipes
Fan Type	120mm PWM ARGB Fan
Fan Speed	800-2000 RPM (±10%)
Air Flow Capacity	Up to 58.13 CFM
Static Pressure	2.27 mm H ₂ O
Noise Level	33.4 dBA (Max)
Bearing Type	Hydro Bearing
Fan Service Life	40,000 hours
Power Connector	4-Pin PWM

Feature	Detail
ARGB Connector	5V 3-Pin ARGB
Digital Display Interface	USB 2.0 (internal header)
Compatible Sockets	Intel LGA1851/1700/1200/115X, AMD AM5/AM4
Material	Metal, Plastic
Item Weight	9.6 ounces

darkFlash

CD PATTERN
SPINDLE



FASCINATING
ARGB EFFECTS



800-2000 RPM
Fan Speed

58.13 CFM
Air Flow

2.27 mmH₂O
Static Pressure

EXHAUST



INTAKE



DOT MATRIX
DISPLAY

HYDRO
BEARING

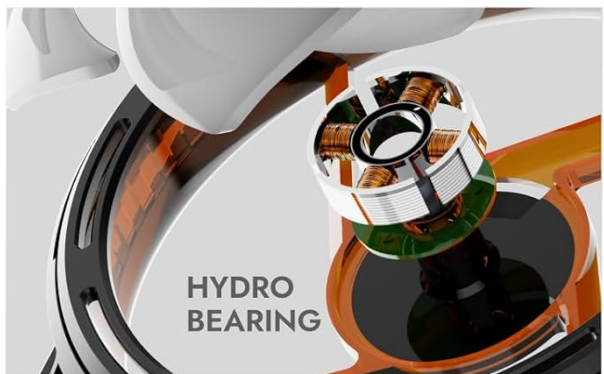


Image: Key performance specifications of the darkFlash E400, such as fan speed, airflow, static pressure, and the hydro bearing design.

HYDRO BEARING

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

800-2000 $\pm 10\%$ RPM
Fan Speed

58.13 CFM(Max)
Air Flow

37.48 dBA(Max)
Air Flow

2.27 mm H₂O
Static Pressure



Image: Diagram illustrating the low-friction hydro bearing mechanism used in the E400's fan, contributing to lower noise and longer lifespan.

DIRECT CONTACT BOTTOM

Heat pipes touch the CPU directly, providing the best heat transfer performance and the most contact area.

HEAT PIPE

6mm
Diameter

4
Count

0.3mm
Wall Thickness



Image: Illustration of the direct contact heat pipe design, where four 6mm copper heat pipes directly touch the CPU for efficient heat transfer.

WARRANTY INFORMATION

The darkFlash E400 CPU Air Cooler comes with a **1-Year Manufacturer Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For specific terms and conditions, refer to the official darkFlash website or contact customer support.

CUSTOMER SUPPORT

If you encounter any issues or have questions regarding your darkFlash E400 CPU Air Cooler that are not addressed in this manual, please contact darkFlash customer support through their official website:

<https://www.darkflash.com>

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

