

ZHAWULEEFB ZH-16-H-FAN

ZHAWULEEFB CPU+GPU Cooling Fan for HP Envy 16-H Series Installation Manual

1. IMPORTANT NOTES AND COMPATIBILITY

This instruction manual provides guidance for the installation and maintenance of the ZHAWULEEFB CPU+GPU Cooling Fan set. This product is specifically designed for **HP Envy 16-H series laptops** that utilize **60W cooling systems**.

It is crucial to verify your laptop's cooling system wattage and the fan part numbers before proceeding with installation. This fan set is compatible with part numbers **N13387-001** and **N13388-001**. It is **not compatible** with 80W cooling systems or fan part numbers N14836-001 and N14837-001.

Always compare the physical appearance of your existing fans with the product images provided to ensure correct compatibility.

2. PRODUCT OVERVIEW

The ZHAWULEEFB CPU+GPU Cooling Fan set is a replacement component designed to maintain optimal operating temperatures for the Central Processing Unit (CPU) and Graphics Processing Unit (GPU) in compatible HP Envy 16-H series laptops. Efficient cooling is essential for stable performance and longevity of your laptop's internal components.

3. SAFETY INFORMATION

- **Power Disconnection:** Always ensure the laptop is completely powered off and disconnected from its power adapter before beginning any installation or maintenance.
- **Battery Removal:** If your laptop has an easily removable battery, remove it prior to opening the chassis. For internal batteries, disconnect the battery connector from the motherboard.
- **Static Electricity:** Electronic components are sensitive to static discharge. Use an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity from your body.
- **Tool Usage:** Use appropriate, non-magnetic tools to avoid damaging screws or internal components.
- **Professional Installation:** If you are not comfortable performing internal hardware replacements, it is recommended to seek assistance from a qualified technician.

4. PACKAGE CONTENTS

- One (1) ZHAWULEEFB CPU+GPU Cooling Fan set (consisting of one CPU fan and one GPU fan).

5. SETUP AND INSTALLATION

Follow these general steps for replacing the cooling fans. Specific disassembly procedures may vary slightly by laptop model. Refer to your laptop's service manual for detailed instructions.

1. **Prepare the Laptop:** Power off your HP Envy 16-H laptop completely. Disconnect the AC adapter and remove the battery if it is external. For internal batteries, open the laptop chassis and carefully disconnect the battery cable from the motherboard.
2. **Open the Laptop Chassis:** Carefully remove the screws securing the bottom cover of your laptop. Use a plastic pry tool to gently separate the cover from the main chassis.
3. **Locate Existing Fans:** Identify the CPU and GPU cooling fans within the laptop. They are typically connected to heatsinks and have small electrical connectors.
4. **Disconnect Fan Cables:** Gently disconnect the fan power cables from their respective headers on the motherboard. Be careful not to pull on the wires.
5. **Remove Old Fans:** Unscrew the mounting screws that secure the old fans to the heatsink assembly and the laptop chassis. Carefully lift out the old fans.
6. **Install New Fans:** Position the new ZHAWULEEFB CPU+GPU cooling fans in their correct locations. Ensure the mounting holes align.



This image displays the ZHAWULEEFB CPU and GPU cooling fan set. The left fan is typically for the CPU, and the right fan is for the GPU, designed for specific HP Envy 16-H series models. Note the connectors and mounting points.

7. **Secure New Fans:** Reinstall the mounting screws to secure the new fans. Do not overtighten.
8. **Reconnect Fan Cables:** Carefully connect the new fan power cables to the appropriate headers on the motherboard. Ensure they are fully seated.
9. **Reassemble Laptop:** Reconnect the internal battery cable (if disconnected). Replace the bottom cover and secure it with all screws.
10. **Power On and Test:** Reconnect the AC adapter and power on the laptop. Monitor fan operation and system temperatures to ensure proper function.

6. OPERATING INSTRUCTIONS

Once installed, the ZHAWULEEFB cooling fans operate automatically, controlled by your laptop's system to regulate internal temperatures. Ensure that the laptop's ventilation vents are not obstructed to allow for proper airflow.

7. MAINTENANCE

- **Dust Cleaning:** Periodically, dust can accumulate on the fan blades and heatsinks, reducing cooling

efficiency. It is recommended to clean the fans and vents every 6-12 months, or more frequently in dusty environments. Use compressed air to gently blow dust out of the fan blades and heatsink fins.

- **Ventilation:** Always operate your laptop on a hard, flat surface to ensure unrestricted airflow to the bottom vents. Avoid using it on soft surfaces like beds or couches.

8. TROUBLESHOOTING

- **Fan Not Spinning:**
 - Check if the fan cable is securely connected to the motherboard.
 - Ensure the laptop is receiving power and is turned on.
 - Verify compatibility; incorrect fan models may not function.
- **Unusual Noise from Fan:**
 - Dust accumulation can cause rattling or grinding noises. Clean the fans as described in the Maintenance section.
 - Ensure no cables or foreign objects are obstructing the fan blades.
- **Laptop Overheating:**
 - Confirm that both CPU and GPU fans are spinning.
 - Clean any dust from the heatsinks and fan blades.
 - Ensure proper thermal paste application on the CPU/GPU if the heatsink was removed during installation.
 - Verify that the fan model is correct for your laptop's wattage (60W for this product).

9. SPECIFICATIONS

Brand	ZHAWULEEFB
Model Number	ZH-16-H-FAN
Compatible Part Numbers	N13387-001, N13388-001
Compatible Devices	HP Envy 16-H Series Laptops (60W models)
Cooling Method	Air
Maximum Rotational Speed	5200 RPM
Noise Level	2 Decibels
Power Input	DC5V 0.5A
Item Weight	2.12 ounces
Package Dimensions	5.51 x 4.72 x 1.57 inches

10. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding this product, please contact the seller or manufacturer directly. You can typically find contact details on the product packaging or through the retailer where the item was purchased.

For more information about ZHAWULEEFB products, you may visit the official brand store:[ZHAWULEEFB Store](#)