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› SilverStone Technology Nitrogen Series Low Profile CPU Cooler RL-NT09-115X User Manual

SilverStone RL-NT09-115X

SilverStone Technology Nitrogen Series Low Profile CPU Cooler RL-NT09-115X User Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your SilverStone Technology Nitrogen Series Low Profile CPU Cooler, model RL-NT09-115X. This cooler is designed for space-limited applications and is compatible with Intel LGA 1156/1155/1150/1151 platforms. It features an extruded aluminum heatsink and a custom 92mm PWM fan for efficient heat dissipation.



Figure 1: SilverStone Nitrogon NT09-115X CPU Cooler, showing its compact design and aluminum fins.

2. SAFETY INFORMATION

- Always disconnect power from your computer before installing or removing any components.
- Handle the CPU cooler and motherboard with care to avoid damage to sensitive components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.
- Keep small parts away from children.
- Ensure proper ventilation inside your computer case for optimal cooling performance.

3. PACKAGE CONTENTS

Verify that all components are present in the package:

- SilverStone Nitrogon NT09-115X CPU Cooler (with pre-applied thermal paste)
- LGA 115x series backplate
- Mounting hardware (push-pins, screws)



Figure 2: Included LGA 115x series backplate, essential for secure mounting.

4. SETUP AND INSTALLATION

4.1 Pre-Installation

1. Ensure your motherboard supports Intel LGA 1156/1155/1150/1151 sockets.
2. Clean the CPU surface thoroughly with isopropyl alcohol to remove any old thermal paste or residue.
3. If the cooler does not have pre-applied thermal paste, apply a thin, even layer of high-quality thermal paste to the center of the CPU's integrated heat spreader (IHS).

4.2 Cooler Installation

1. Place the LGA 115x backplate on the backside of the motherboard, aligning the holes with the CPU socket mounting holes.
2. Carefully position the CPU cooler over the CPU, aligning the four mounting pins with the holes on the motherboard.
3. Press down on each of the four push-pins until they click into place. Apply even pressure diagonally to ensure secure contact. The reinforced backplate design helps reduce motherboard bending and provides tighter CPU contact.
4. Connect the 4-pin PWM fan cable from the cooler to the CPU_FAN header on your motherboard.



Figure 3: Top view of the CPU cooler correctly installed on a motherboard.



Figure 4: Side view of the CPU cooler installed, highlighting its low-profile design.

5. OPERATING INSTRUCTIONS

The SilverStone NT09-115X CPU cooler operates automatically via its 4-pin PWM connection to the motherboard. The motherboard's BIOS or operating system software will control the fan speed based on CPU temperature, ensuring optimal cooling performance and noise levels.

- **PWM Control:** The fan speed will dynamically adjust between its minimum and maximum RPM (up to 2500 RPM) to maintain desired CPU temperatures.
- **Airflow:** The fan provides an airflow of up to 47 CFM.
- **Noise Level:** The maximum noise level is 32.0 decibels, designed for quiet operation.



Figure 5: The custom 92mm PWM fan, designed for efficient and quiet cooling.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your CPU cooler.

- **Dust Removal:** Periodically (e.g., every 3-6 months), use compressed air to clean dust from the heatsink fins and fan blades. Ensure the fan is held stationary during cleaning to prevent damage to the bearings.
- **Fan Inspection:** Check the fan for any obstructions or unusual noises. If the fan is damaged or excessively noisy, consider replacing it.
- **Thermal Paste:** If you notice consistently high CPU temperatures, the thermal paste may need to be reapplied. This requires removing the cooler, cleaning both surfaces, and applying new thermal paste.

7. TROUBLESHOOTING

- **High CPU Temperatures:**
 - Ensure the cooler is securely mounted and making good contact with the CPU.
 - Verify that the thermal paste application is correct and sufficient.
 - Check if the fan is spinning correctly and not obstructed by cables.
 - Ensure adequate airflow within your computer case.
- **Fan Not Spinning:**
 - Check if the 4-pin fan connector is securely plugged into the CPU_FAN header on the motherboard.
 - Verify fan settings in the motherboard BIOS/UEFI.
- **Excessive Fan Noise:**
 - Clean any dust from the fan blades and heatsink.
 - Ensure no cables are touching the fan blades.
 - Check for loose mounting screws or components.

8. SPECIFICATIONS

Feature	Specification
Model	RL-NT09-115X
Brand	SilverStone
Compatible Sockets	Intel LGA1156/1155/1150/1151
Cooling Method	Air Cooling (Fan)
Material	Aluminum (Extruded fins, Aluminum core)
Fan Size	92mm
Fan Connector	4-Pin PWM
Maximum Rotational Speed	2500 RPM
Air Flow Capacity	47 CFM
Noise Level	32 Decibels (Max)
Voltage	12 Volts
Item Weight	9.6 ounces
Dimensions (Height)	45mm (Low Profile)

Feature	Specification
Compatible Devices	Desktop

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The SilverStone Technology Nitrogen Series Low Profile CPU Cooler RL-NT09-115X comes with a **1-year warranty** covering parts and labor from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, accident, abuse, misuse, natural disaster, or unauthorized modification.

9.2 Technical Support

For technical assistance, troubleshooting, or warranty claims, please visit the official SilverStone Technology website or contact their customer support. You may find contact information and additional resources at www.silverstonetek.com.