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› [Thermalright TL-C12B-S V3 120mm ARGB CPU Case Fan Instruction Manual](#)

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Thermalright TL-C12B-S V3 120mm ARGB CPU Case Fan Instruction Manual

Model: TL-C12B-S V3

Brand: Thermalright

1. PRODUCT OVERVIEW

The Thermalright TL-C12B-S V3 is a 120mm ARGB CPU case fan designed for efficient cooling and aesthetic enhancement of computer systems. It features a 4-pin PWM connector for automatic speed control and an ARGB lighting connector for customizable lighting effects. The fan incorporates an S-FDB (Fluid Dynamic Bearing) for quiet operation and extended lifespan.

TL-C12B-S V3 X3

120mm Infinite Mirror ARGB Fan



Image: Thermalright TL-C12B-S V3 ARGB fans showcasing their features.

2. KEY FEATURES

- **High Performance Cooling:** Automatic speed control via 4-pin PWM fan cable interface, adjusting speed based on motherboard temperature.
- **Quality S-FDB Bearings:** Engineered S-FDB (Fluid Dynamic Bearing) technology minimizes fan noise and extends the fan's operational life by stabilizing the fan blade in motion.
- **Unique ARGB Mirror Lighting:** Features an infinite mirror structure and 9 LED atomized fan blades for multiple phantom lighting effects and softer ARGB illumination.
- **Versatile Application:** Suitable for use as a case fan, with CPU coolers, liquid coolers, and radiators to enhance overall system cooling.
- **Durable Construction:** Fan blades and frame are made from industrial-grade PBT+PC polymers for strength and stability.
- **Vibration Absorption:** Each corner of the fan includes pre-installed silicone rubber pads for noise and vibration damping.

3. SPECIFICATIONS

Feature	Specification
Product Dimensions	4.72"L x 0.98"W x 4.72"H (120mm x 25mm x 120mm)
Power Connector Type	4-Pin PWM
ARGB Connector Type	3-Pin 5V Addressable RGB
Voltage	12 Volts (Fan), 5 Volts (ARGB)
Wattage	2.4 watts
Cooling Method	Air
Noise Level	25.6 Decibels
Maximum Rotational Speed	1500 RPM
Air Flow Capacity	66.17 Cubic Feet Per Minute (CFM)
Bearing Type	S-FDB (Fluid Dynamic Bearing)
Material	PBT+PC (Fan Blades & Frame), Copper (Internal)

4. WHAT'S IN THE BOX

- Thermalright TL-C12B-S V3 CPU Fan (3-Pack)
- Mounting Screws

5. SETUP & INSTALLATION

Follow these steps to properly install your Thermalright TL-C12B-S V3 fans in your computer case or on a cooler.

5.1. Identify Fan Airflow Direction

The fan blades indicate the intake side, and the frame side indicates the exhaust. Ensure correct orientation for optimal airflow within your case.

POWER FROM DESIGN

After years of engineering, Thermalright comes up the original design of TL-C12 series fan blade, able to maximize airflow within 1500RPM fan speed. Focus on balance between airflow and static pressure performance, the Thermalright TL-C12B-S V3 X3 fan series is a all-around choice for heatsink, radiator or computer case cooling scenarios.



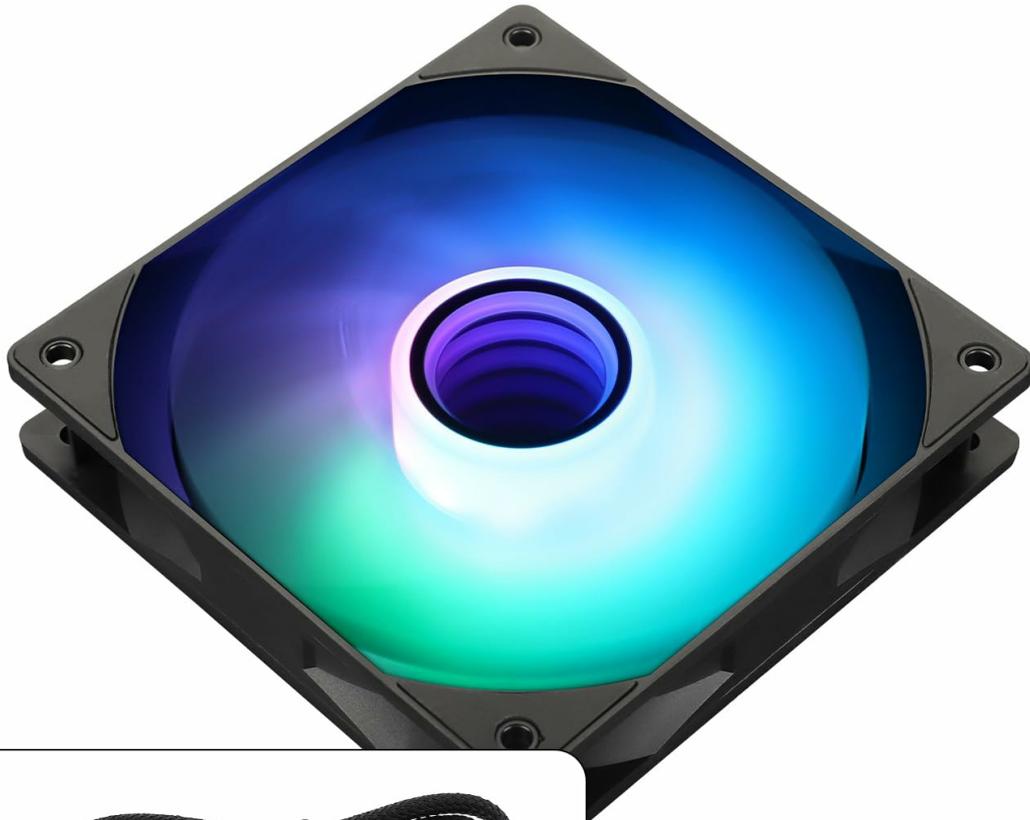
Image: Fan blade design and airflow direction.

5.2. Connect PWM Power Cable

Connect the 4-pin PWM fan power connector to an available 4-pin FAN socket on your motherboard. If installing multiple fans, daisy-chain them using the provided connectors. The total number of fans connected to a single motherboard header should be less than three to ensure stable power delivery and speed synchronization.

Focus on performance from an engineering perspective

Airflow 9 blade design outputs rated 66.17CFM at 1500RPM



Support PWM Fan Speed Control

Image: 4-pin PWM power connector.

5.3. Connect ARGB Lighting Cable

For ARGB lighting functionality, connect the 3-pin 5V addressable RGB connector to a compatible +5V 3-pin ARGB header on your motherboard. Daisy-chain additional ARGB components to synchronize lighting effects. The total number of ARGB components connected to a single motherboard header should be less than five to prevent overloading.

VERSATILE COOLING SCENARIOS



Case Airflow



Air Coolers



Water Cooling Radiators

Image: PWM and ARGB lighting connectors.

5.4. Mount the Fan

Secure the fan to your computer case or cooler using the provided mounting screws. Ensure the fan is firmly attached to prevent vibration and noise.

PWM and Addressable RGB Lighting sharing support

TL-C12B-S V3 X3 is equipped with additional PWM and 3pin ARGB header for fan speed and lighting effect sync.



Image: Fan with soft-touch rubber pads for vibration absorption.

5.5. Installation Video Guide

For a visual guide on connecting and installing the fans, please refer to the video below:

Video: Thermalright TL-C12C Series Fan Quick Start Guide. This video demonstrates the connection of PWM and ARGB cables to the motherboard, as well as the physical installation of the fan into a PC case, including identifying airflow direction and securing with screws.

6. OPERATING INSTRUCTIONS

Once installed and connected, the Thermalright TL-C12B-S V3 fans will operate automatically.

- **Fan Speed Control:** The 4-pin PWM connection allows your motherboard to automatically adjust fan speed based on CPU or system temperature, ensuring optimal cooling and noise levels. You can typically configure fan curves in your motherboard's BIOS/UEFI settings or through manufacturer-provided software.
- **ARGB Lighting Control:** The 3-pin 5V ARGB connection enables control of the fan's lighting effects through your motherboard's ARGB software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, Gigabyte RGB Fusion, ASRock Polychrome Sync). This allows for synchronization with other ARGB components and customization of colors and patterns.

7. MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your fans.

- **Dust Cleaning:** Periodically clean dust from the fan blades and frame using compressed air or a soft brush. Ensure the computer is powered off and unplugged before cleaning.
- **Bearing Maintenance:** The S-FDB bearing is designed to be maintenance-free. Do not attempt to disassemble the fan for lubrication or repair, as this may void the warranty and damage the product.
- **Cable Inspection:** Occasionally check that all power and ARGB cables are securely connected and free from damage.

8. TROUBLESHOOTING

If you encounter issues with your Thermalright TL-C12B-S V3 fans, refer to the following common solutions:

- **Fan Not Spinning:**
 - Check if the 4-pin PWM power cable is securely connected to the motherboard's FAN header.
 - Ensure the motherboard's FAN header is enabled in BIOS/UEFI settings.
 - Verify that the fan speed control software or BIOS settings are not set to 0 RPM or a very low threshold.
- **ARGB Lighting Not Working/Incorrect:**
 - Confirm the 3-pin 5V ARGB cable is correctly connected to a compatible +5V 3-pin ARGB header on the motherboard. **Do not connect to a 12V RGB header, as this will damage the LEDs.**
 - Check your motherboard's ARGB control software for proper configuration and enabled lighting effects.
 - Ensure the total number of ARGB components connected to a single header does not exceed the motherboard's specified limit.
- **Excessive Noise:**
 - Verify that the fan is securely mounted and the mounting screws are tightened.
 - Check for any cables or obstructions touching the fan blades.
 - Clean any dust buildup on the fan blades.
 - Adjust fan speed settings in your motherboard's BIOS/UEFI or software to a lower RPM if noise is a concern and temperatures allow.

9. WARRANTY & SUPPORT

Thermalright products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please refer to the official Thermalright website or contact your local retailer. Keep your proof of purchase for warranty claims.