Thermalright C12RB-S V2

Thermalright TL-C12RB-S V2 120mm Reverse Airflow PWM ARGB Case Fan

User Manual

Model: C12RB-S V2 | Brand: Thermalright

1. Introduction

The Thermalright TL-C12RB-S V2 is a 120mm reverse airflow PWM ARGB case fan designed for efficient PC cooling. This fan features automatic speed control via a 4-pin PWM connector, allowing the motherboard to adjust fan speed based on temperature. Its reverse airflow design is ideal for specific chassis air duct configurations and unified lighting effects, providing high air volume for effective cooling. The fan incorporates S-FDB bearings for quiet operation and extended lifespan, and supports addressable RGB (ARGB) lighting for customizable visual effects.

Key Features:

- **High Performance Cooling:** Automatic speed control via 4-pin PWM interface, with a maximum speed of 1500 RPM.
- **Quality S-FDB Bearings:** Ensures minimal noise and extended fan lifespan by stabilizing fan blade motion.
- **Reverse Wind Design:** Fan blades direct airflow in the opposite direction compared to standard fans, optimizing chassis air ducting and lighting effects.
- **ARGB Aperture:** Features addressable RGB lighting for customizable visual aesthetics.
- **Versatile Application:** Suitable for use as a case fan, with CPU coolers, or liquid coolers to enhance overall system cooling.

2. What's in the Box

Please verify that all components are present before proceeding with installation:

- Thermalright TL-C12RB-S V2 Case Fan
- Mounting Screws

3. Installation Guide

Proper installation is crucial for optimal performance and longevity of your Thermalright fan. Follow these steps carefully:

3.1. Fan Placement and Airflow Direction

The TL-C12RB-S V2 features a reverse airflow design. This means the fan blades are oriented to pull air from the side typically considered the 'exhaust' side of a standard fan, making it ideal for intake applications where you want the aesthetically pleasing side of the fan to face inwards while still drawing air into the case.

Image: Illustration of the reverse airflow design, showing how the fan draws air into the case for optimal cooling.

3.2. Mounting the Fan

The fan can be mounted to your PC case, CPU heatsink, or radiator. Ensure the fan is oriented correctly for your desired airflow path.

3.2.1. Case Mounting (Intake)

For case intake, use the included screws to secure the fan to the desired mounting location. The reverse airflow design ensures that the visible side of the fan pulls air into the case.

Your browser does not support the video tag.

Video: Installation guide for reverse airflow fans, demonstrating how to install the fan on a PC case for intake using screws. This video is provided by THERMALRIGHT.EUR.

3.2.2. Heatsink/Radiator Mounting (Exhaust)

When installing the fan on a CPU heatsink or radiator, ensure it is configured to exhaust air away from the component for optimal heat dissipation. Use the appropriate mounting hardware provided with your heatsink or radiator, or the long screws and nuts if installing on a case for intake.

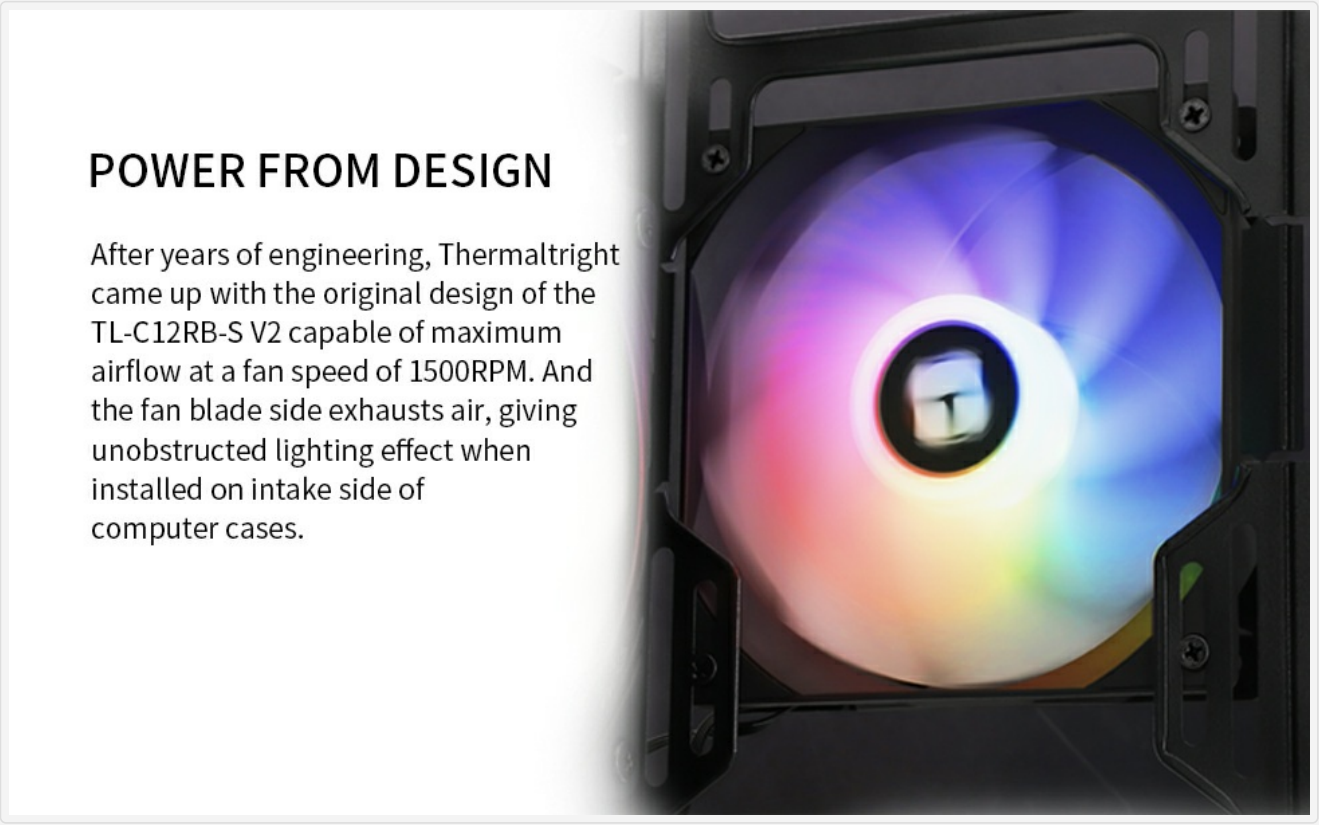

Image: Fan installed on a CPU heatsink, demonstrating proper orientation for exhaust airflow.

3.3. Cable Connections

The fan requires two connections: one for power/speed control (PWM) and one for lighting (ARGB).

3.3.1. PWM Fan Speed Connection

Connect the 4-pin PWM cable from the fan to an available 4-pin fan header on your motherboard. This allows the motherboard to control the fan speed automatically based on system temperature. You can daisy-chain multiple fans for synchronized speed control, but ensure the total number of fans connected to a single header does not exceed the motherboard's power rating (typically less than three fans per standard header).

Image: The 4-pin PWM connector for fan speed control.

3.3.2. ARGB Lighting Connection

Connect the 3-pin ARGB cable from the fan to an available +5V ARGB header on your motherboard. Ensure the arrows on the connectors align to prevent damage. This connection enables control of the fan's lighting effects through your motherboard's ARGB software. The total number of ARGB components connected to a single header should typically be less than five to avoid overloading the header.

Image: The fan displaying its addressable RGB lighting effects.

4. Operation

4.1. Fan Speed Control (PWM)

Once connected to a 4-pin PWM header, the fan speed will be automatically regulated by your motherboard based on CPU or system temperatures. You can typically adjust fan curves and profiles through your motherboard's BIOS/UEFI settings or dedicated software utilities provided by your motherboard manufacturer.

4.2. ARGB Lighting Control

With the 3-pin ARGB cable connected to a +5V ARGB header, you can customize the fan's lighting effects using your motherboard's ARGB synchronization software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, Gigabyte RGB Fusion, ASRock Polychrome Sync). Refer to your motherboard manual for specific instructions on using its ARGB software.

5. Maintenance

Regular maintenance helps ensure optimal performance and extends the lifespan of your fan:

- **Cleaning:** Periodically clean the fan blades and frame to remove dust buildup. Use compressed air or a soft, dry cloth. Ensure the fan is powered off before cleaning.
- **Inspection:** Check for any loose cables or obstructions around the fan blades.
- **Bearing:** The S-FDB bearing is designed to be maintenance-free and does not require lubrication.

6. Troubleshooting

If you encounter issues with your fan, refer to the following common solutions:

- **Fan Not Spinning:**

- Ensure the 4-pin PWM cable is securely connected to the motherboard fan header.
- Check motherboard BIOS/UEFI settings to ensure the fan header is enabled and configured correctly.
- Test the fan on a different fan header or with a fan tester if available.

- **No ARGB Lighting:**
  - Verify the 3-pin ARGB cable is correctly connected to a +5V ARGB header (not a +12V RGB header).
  - Ensure the arrows on the ARGB connectors are aligned.
  - Check your motherboard's ARGB software for lighting control and ensure it's enabled.
  - Confirm that the total number of ARGB components connected does not exceed the header's limit.
- **Excessive Noise:**
  - Ensure the fan is securely mounted and not vibrating against the case or other components.
  - 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.

7. Specifications

Feature	Detail
Product Dimensions	4.72"L x 0.98"W x 4.72"H (120mm x 25mm x 120mm)
Item Model Number	C12RB-S V2 D6
Brand	Thermalright
Power Connector Type	4-Pin PWM
Voltage	12 Volts (Fan), 5 Volts (ARGB)
Wattage	1.8 watts
Cooling Method	Air
Compatible Devices	Desktop PCs
Noise Level	23.2 Decibels (Max)
Material	Silicone (Anti-vibration pads)
Maximum Rotational Speed	1500 RPM

8. Warranty & Support

Thermalright products are manufactured to high-quality standards. For specific warranty information, please refer to the warranty card included with your product or visit the official Thermalright website. If you encounter any issues or require technical assistance, please contact Thermalright customer support through their official channels. Keep your proof of purchase for warranty claims.