Ant Esports ICE-240

Ant Esports ICE-240 240mm Addressable RGB AIO CPU Liquid Cooler User Manual

Model: ICE-240 ARGB

Efficient Cooling for High-Performance Systems

1. Introduction

The Ant Esports ICE-240 is a 240mm All-in-One (AIO) CPU liquid cooler designed to provide efficient thermal management for a wide range of Intel and AMD processors. Featuring Addressable RGB (ARGB) lighting, this cooler combines performance with customizable aesthetics. This manual provides essential information for the proper installation, operation, and maintenance of your ICE-240 liquid cooler.

Image 1.1: Ant Esports ICE-240 ARGB AIO Liquid Cooler overview.

2. Product Features

- **240mm Radiator:** Provides substantial surface area for effective heat dissipation.
- **Addressable RGB (ARGB) Lighting:** Customizable lighting on fans and pump block, controllable via motherboard software.
- **High Static Pressure Fans:** Designed for optimal airflow through the radiator, ensuring efficient cooling.
- **Durable EPDM Tubing:** Ensures high tensile resistance and prevents kinking or permeation for long-term reliability.
- **Large Copper Cold Plate:** Maximizes contact with the CPU for superior heat transfer.
- **PWM Fan Control:** Allows for dynamic fan speed adjustment based on CPU temperature, balancing performance and noise.
- **Wide Compatibility:** Supports various Intel (LGA115X/1200/1700/1366/2011/2066) and AMD (FM1/FM2/AM2/AM2+/AM3/AM3+/AM4/AM5) sockets.

Image 2.1: The ICE-240 is designed for systems with high Thermal Design Power (TDP).

Image 2.2: Illustration of the durable EPDM tubing, designed for longevity and resistance to bending.

Image 2.3: View of the large custom-made copper cold plate for efficient heat transfer.

Image 2.4: Close-up of the dense aluminum radiator fins, providing a large surface area for rapid heat dissipation.

3. Package Contents

Verify that all components listed below are present in your package before beginning installation.

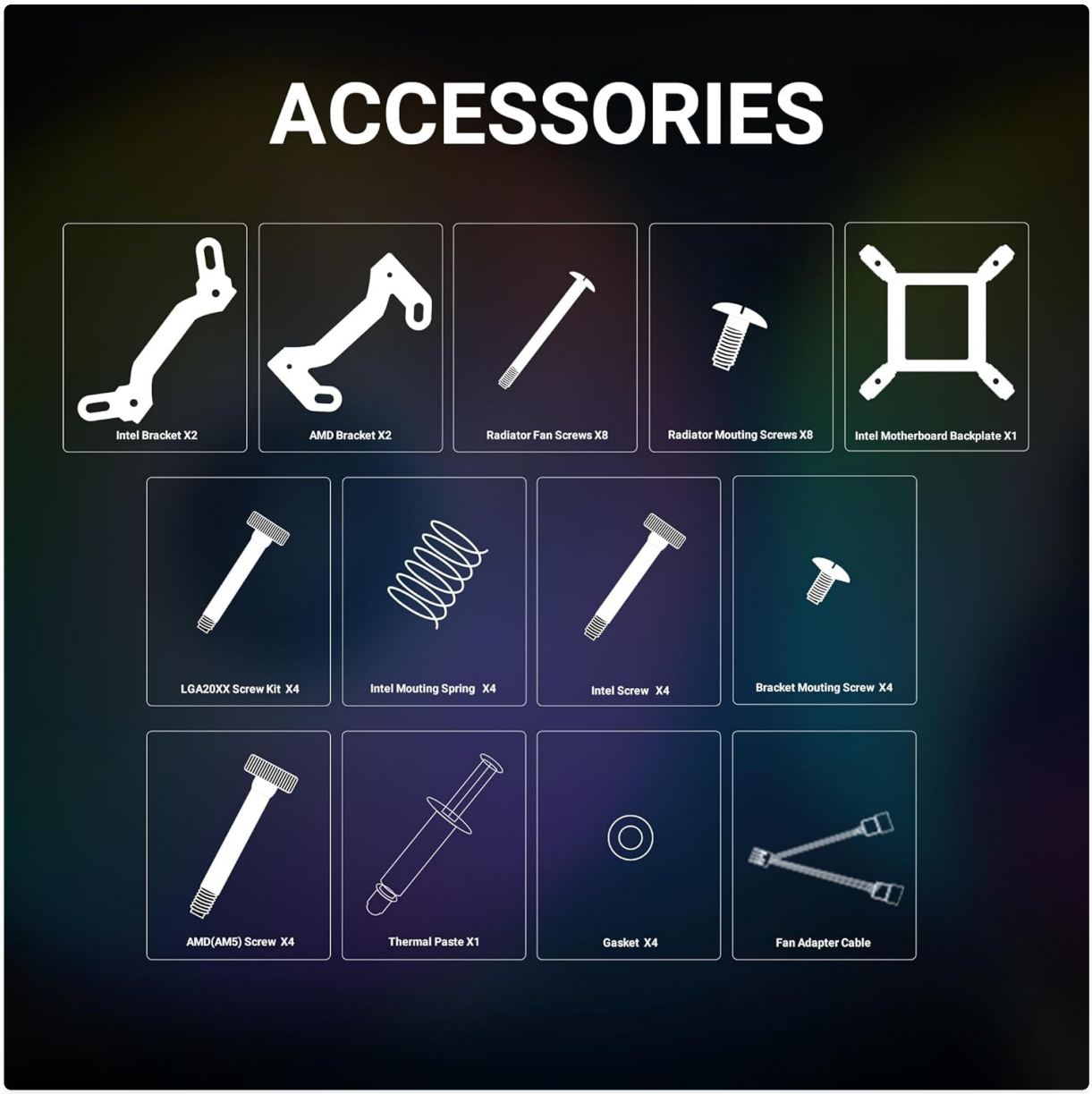

Image 3.1: Included accessories for the Ant Esports ICE-240 ARGB AIO Liquid Cooler.

- Ant Esports ICE-240 Radiator with Pump/Cold Plate Assembly
- 120mm ARGB Fans (x2)
- Intel Mounting Bracket (x2)
- AMD Mounting Bracket (x2)
- Radiator Fan Screws (x8)
- Radiator Mounting Screws (x8)
- Intel Motherboard Backplate (x1)
- LGA20XX Screw Kit (x4)
- Intel Mounting Spring (x4)
- Intel Screw (x4)
- Bracket Mounting Screw (x4)
- AMD(AM5) Screw (x4)
- Thermal Paste (x1)
- Gasket (x4)
- Fan Adapter Cable (x1)

4. Specifications

Feature	Detail
Product Dimensions (Radiator)	27.4L x 2.7W x 12H Centimeters (274×120×27 mm)
Brand	Ant Esports
Power Connector Type (Pump)	3-Pin
Voltage (ARGB)	5 Volts
Cooling Method	Water
Compatible Devices	Desktop
Noise Level (Fan)	32 dB(A) Max
Material (Radiator)	Aluminium
Maximum Rotational Speed (Fan)	2000 RPM
Air Flow Capacity (Fan)	75 CFM Max
Fan Speed	800~2000 RPM±10%
Fan Air Pressure	2.9 mmAq
Fan Dimensions	120×120×25 mm
CPU Socket Compatibility	Intel - LGA115X/1200/1700/1366/2011/2066, AMD - FM1/FM2/AM2/AM2+/AM3/AM3+/AM4/AM5
Item Weight	1 kg 180 g
Country of Origin	China

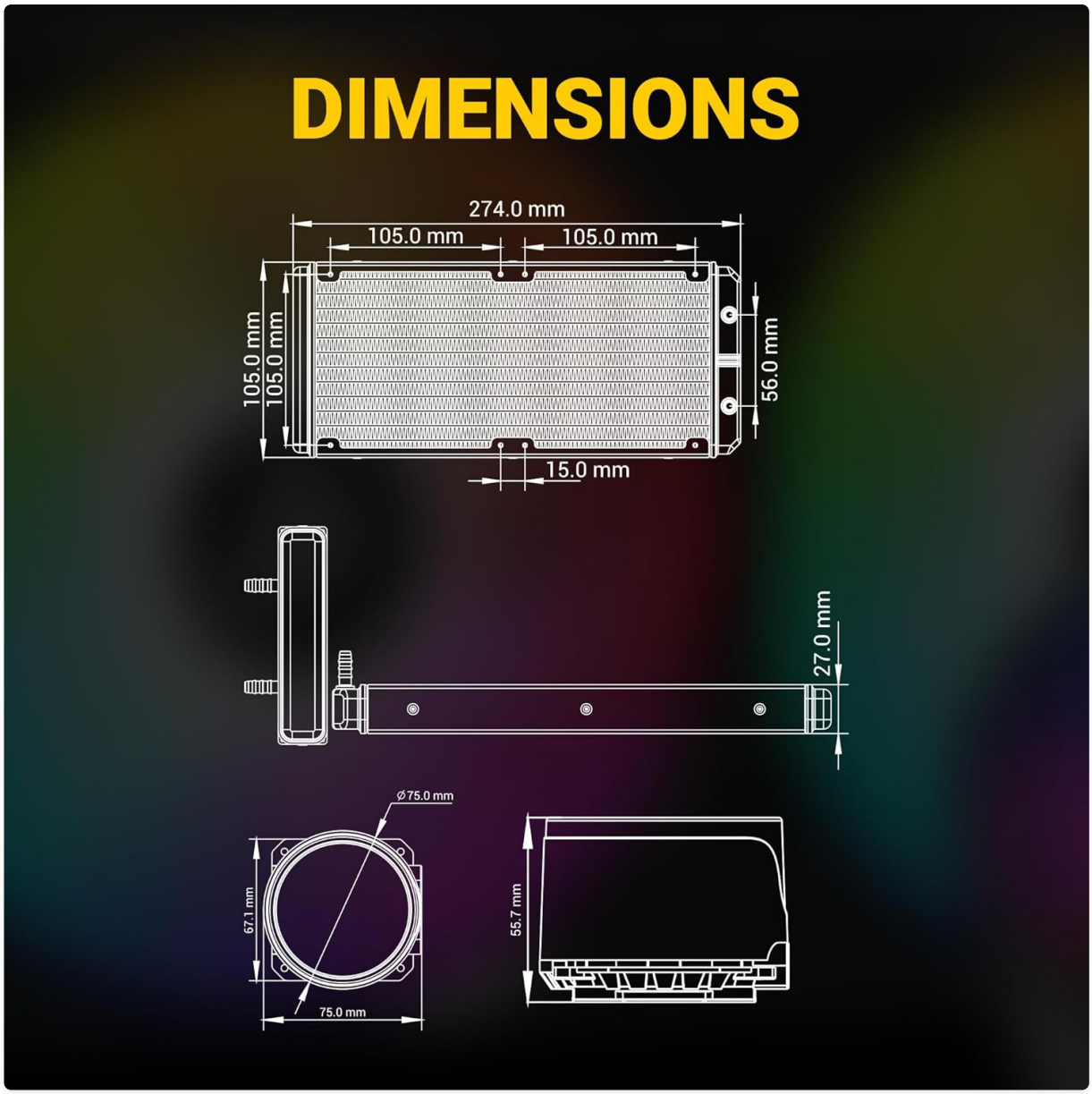

Image 4.1: Detailed dimensions of the Ant Esports ICE-240 ARGB AIO Liquid Cooler components.

5. Compatibility

The Ant Esports ICE-240 liquid cooler is compatible with a wide range of CPU sockets from both Intel and AMD platforms:

- **Intel Sockets:** LGA115X (1150, 1151, 1155, 1156), LGA1200, LGA1700, LGA1366, LGA2011, LGA2066
- **AMD Sockets:** FM1, FM2, AM2, AM2+, AM3, AM3+, AM4, AM5

Image 5.1: Visual representation of supported Intel and AMD CPU sockets.

6. Installation Guide

This section provides a general overview of the installation process. Refer to your motherboard and PC case manuals for specific guidance on component placement and cable routing.

6.1. Preparing for Installation

1. Ensure your system is powered off and disconnected from the power source.
2. Gather all necessary tools, including a screwdriver.
3. Identify the correct mounting hardware for your CPU socket (Intel or AMD).
4. **Important:** Peel off the protective film from the copper cold plate surface of the pump before applying thermal paste.

6.2. Mounting the Radiator

1. Determine the optimal mounting location for the 240mm radiator in your PC case (e.g., top, front).
2. Attach the two 120mm fans to the radiator using the provided radiator fan screws. Ensure the fan airflow direction is appropriate for your case's cooling strategy (intake or exhaust).

3. Secure the radiator assembly to your PC case using the radiator mounting screws.

6.3. Mounting the Pump/Cold Plate

1. Install the appropriate backplate (for Intel sockets) on the rear of your motherboard, if required.
2. Attach the correct mounting brackets (Intel or AMD) to the pump block.
3. Apply a small amount of the included thermal paste to the center of your CPU's Integrated Heat Spreader (IHS).
4. Carefully place the pump/cold plate assembly onto the CPU, aligning the mounting holes.
5. Secure the pump/cold plate to the motherboard using the appropriate screws and springs, tightening them in a cross pattern until snug. Do not overtighten.

6.4. Connecting Cables

1. Connect the pump's 3-pin power cable to an available CPU_FAN or AIO_PUMP header on your motherboard.
2. Connect the fan power cables to the CPU_FAN or SYS_FAN headers on your motherboard. Use the included fan adapter cable if necessary to connect multiple fans to a single header.
3. Connect the ARGB lighting cables from the fans and pump to a 5V 3-pin ARGB header on your motherboard. Ensure correct polarity to avoid damage.

7. Operation

7.1. Fan and Pump Control (PWM)

The fans and pump support Pulse Width Modulation (PWM) control, allowing their speeds to be adjusted dynamically. This can be configured through your motherboard's BIOS settings or via compatible software provided by your motherboard manufacturer. Adjusting these settings can optimize cooling performance and minimize noise levels.

Image 7.1: Example of a software interface for PWM fan control. Actual interface may vary.

7.2. ARGB Lighting Control

The Addressable RGB (ARGB) lighting on the pump block and fans can be synchronized and controlled via a 5V 3-pin ARGB header on your motherboard. Utilize your motherboard's RGB control software (e.g., ASUS Aura Sync, MSI Mystic Light, GIGABYTE RGB Fusion, ASRock Polychrome Sync) to customize lighting effects and colors.

Image 7.2: The pump block and fans feature vivid ARGB lighting, controllable via motherboard software.

8. Maintenance

Regular maintenance helps ensure optimal performance and longevity of your liquid cooler.

- **Dust Removal:** Periodically clean dust from the radiator fins and fan blades using compressed air or a soft brush. Ensure fans are not spinning during cleaning.
- **Cable Inspection:** Check all cables (power, fan, ARGB) for secure connections and any signs of wear or damage.
- **Tubing Inspection:** Inspect the tubing for any signs of leaks, kinks, or damage. While the EPDM tubing is durable, regular checks are recommended.
- **Thermal Paste:** Reapply thermal paste if you remove the pump/cold plate from the CPU for any reason.

9. Troubleshooting

If you encounter issues with your Ant Esports ICE-240 liquid cooler, refer to the following common troubleshooting steps:

- **No Power/Fans Not Spinning:**

- Ensure all power cables (pump and fans) are securely connected to the correct motherboard headers.
- Check BIOS settings to ensure fan headers are enabled and configured correctly.

- **Poor Cooling Performance/High CPU Temperatures:**
  - Verify that the pump is running (you may hear a faint hum or feel vibrations).
  - Ensure the protective film has been removed from the cold plate before installation.
  - Check that thermal paste was applied correctly and the cold plate has firm contact with the CPU.
  - Clean any dust buildup on the radiator fins and fan blades.
  - Confirm fan orientation for optimal airflow (e.g., pushing air through the radiator).
- **ARGB Lighting Not Working/Incorrect Colors:**
  - Ensure the ARGB cables are correctly connected to a 5V 3-pin ARGB header on your motherboard. Do not connect to a 12V 4-pin RGB header, as this can cause damage.
  - Check your motherboard's RGB software for lighting control and synchronization settings.
  - Verify that the ARGB header is enabled in your motherboard's BIOS.

10. Warranty and Support

The Ant Esports ICE-240 ARGB AIO CPU Liquid Cooler comes with a**3-year manufacturer warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or further assistance, please contact Ant Esports customer service through their official website or the retailer where the product was purchased. Please have your proof of purchase ready when contacting support.

Manufacturer: Ant Esports

Country of Origin: China