ZOTAC ZT-D40900B-10P

ZOTAC Gaming GeForce RTX 4090 AMP Extreme AIRO User Manual

Model: ZT-D40900B-10P

Product Overview

The ZOTAC GAMING GeForce RTX 4090 AMP Extreme AIRO is engineered for peak performance, featuring NVIDIA's Ada Lovelace architecture. Its AIR-Optimized design ensures efficient cooling, while advanced features like DLSS and ray tracing deliver an immersive gaming experience. This manual provides essential information for setup, operation, maintenance, and troubleshooting.



Figure 1: ZOTAC Gaming GeForce RTX 4090 AMP Extreme AIRO Graphics Card and Packaging.

What's in the Box

Verify that all components are present before proceeding with installation:

- ZOTAC GAMING GeForce RTX 4090 AMP Extreme AIRO graphics card
- GPU Support Stand
- 3-pin RGB Header Cable
- 4x 8-pin-to-12VHPWR cable
- User Manual (PDF available here)



Figure 2: Included accessories and documentation.

Setup

Follow these steps to properly install your graphics card:

1. **Prepare Your System:** Power off your computer and disconnect all cables. Open your PC case.
2. **Locate PCIe Slot:** Identify an available PCI Express 4.0 16x slot on your motherboard. This card requires 3.5 slots of clearance.
3. **Install Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it clicks into place. Secure the card with the case's retention mechanism.
4. **Connect Power:** Connect the 12VHPWR power cable to the graphics card. Ensure a secure connection. A 1000-watt power supply is recommended. If using the included 4x 8-pin-to-12VHPWR adapter, ensure all 8-pin connectors from your power supply are securely attached to the adapter.
5. **Install GPU Support Stand:** Due to the card's size (Length: 355.5mm / 14in, Height: 149.6mm / 5.9in, Width: 72.1mm / 2.8in), use the included GPU Support Stand to prevent sag and ensure stability.

6. **Close Case and Connect Peripherals:** Close your PC case, reconnect all cables, and power on your system.
7. **Install Drivers:** Download and install the latest Game Ready or NVIDIA Studio Drivers from the official NVIDIA website.

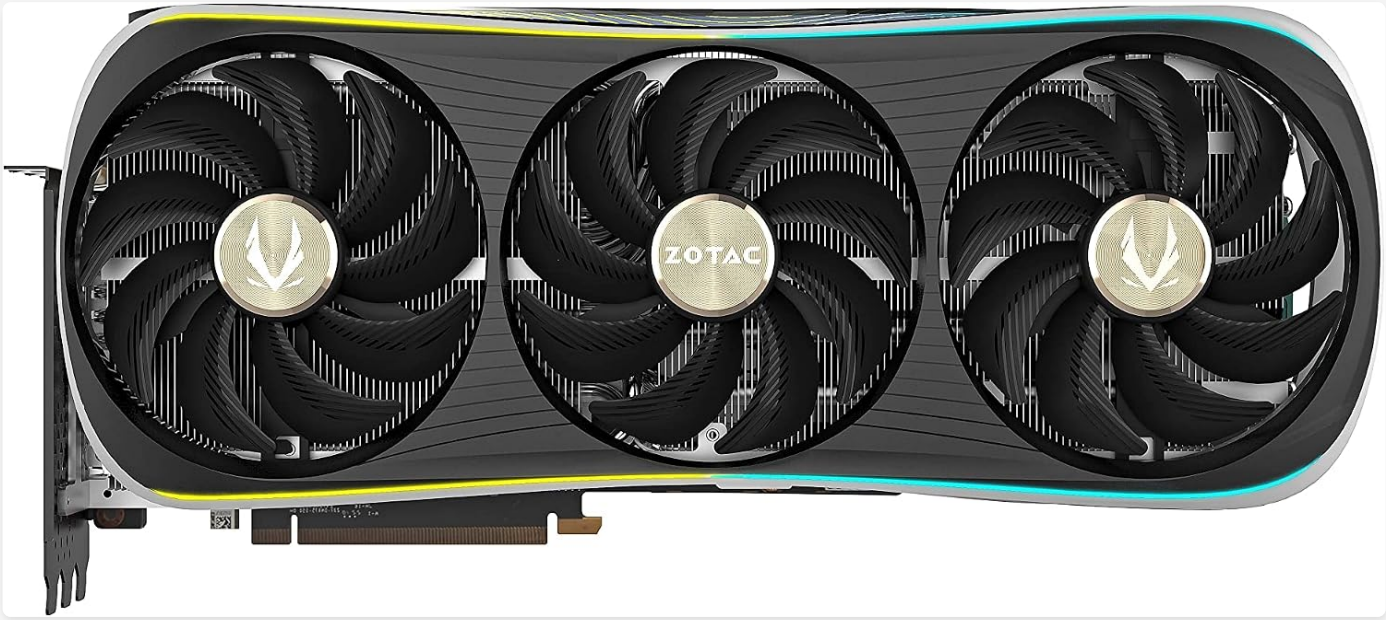


Figure 3: Top view of the graphics card, highlighting the triple fan design.

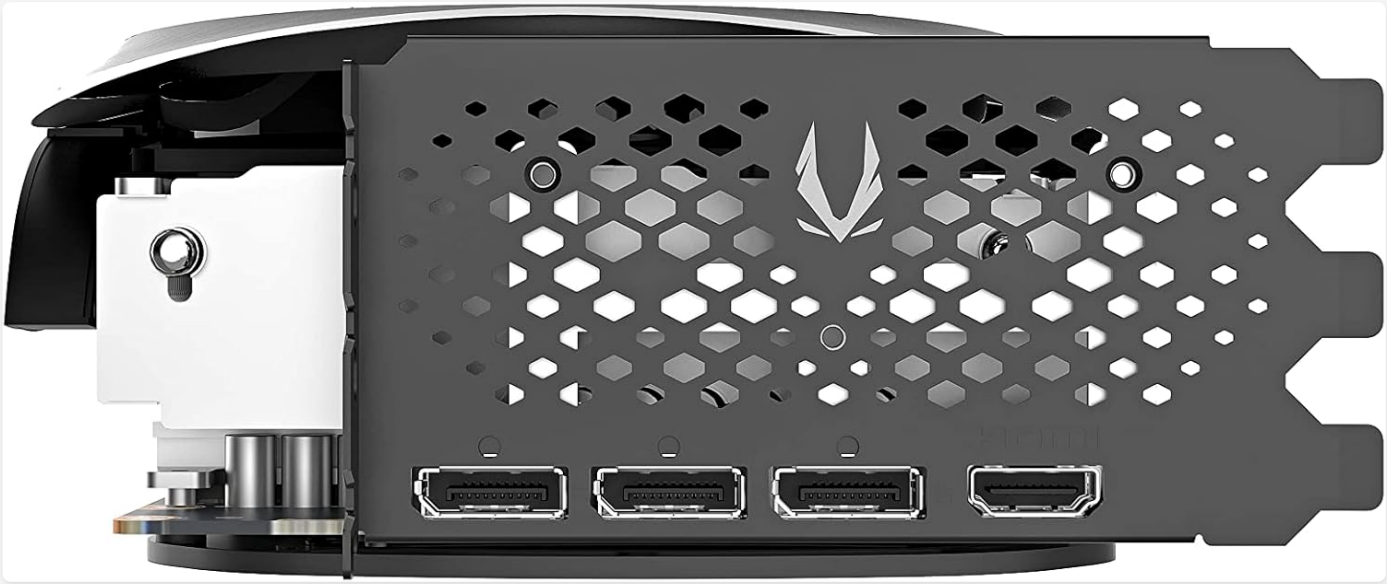


Figure 4: Side view displaying the DisplayPort and HDMI output connectors.

Operating the Graphics Card

The ZOTAC Gaming GeForce RTX 4090 AMP Extreme AIRO offers advanced features for optimal performance and customization:

- **IceStorm 3.0 Advanced Cooling:** This cooling system features three 110mm dual ball bearing fans, a thicker heatsink, and 9 composite heatpipes for efficient heat dissipation. Active Fan Control and FREEZE Fan Stop ensure quiet operation under light loads and powerful cooling when needed.
- **SPECTRA 2.0 RGB Lighting:** Customize the card's aesthetics with SPECTRA 2.0 RGB Lighting. This feature allows for dynamic lighting effects across multiple zones, compatible with external LED strips via the included 3-pin RGB Header Cable. Control lighting through the ZOTAC GAMING FireStorm Utility software.
- **Dual BIOS:** The card includes a Dual BIOS feature, allowing users to switch between different BIOS profiles for performance or quiet operation. Refer to the FireStorm Utility for more details.

- **NVIDIA DLSS:** Leverage NVIDIA Deep Learning Super Sampling (DLSS) for AI-powered performance boosts, delivering higher frame rates while maintaining crisp image quality.
- **Ray Tracing:** Experience realistic lighting, shadows, and reflections with dedicated 3rd Generation RT Cores for real-time ray tracing.

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Video 1: Official ZOTAC Gaming GeForce RTX 40 Series product showcase, highlighting key features like cooling and RGB lighting.

Maintenance

Proper maintenance ensures the longevity and optimal performance of your graphics card:

- **Dust Removal:** Regularly clean dust from the fans and heatsink using compressed air. Ensure the system is powered off before cleaning.
- **Driver Updates:** Keep your graphics drivers updated to the latest version from NVIDIA's official website to ensure compatibility and performance improvements.
- **Temperature Monitoring:** Use monitoring software (e.g., ZOTAC GAMING FireStorm Utility) to keep an eye on GPU temperatures. Ensure adequate airflow within your PC case.
- **Physical Inspection:** Periodically check all cable connections, especially the 12VHPWR power input, to ensure they are secure and free from damage.

Troubleshooting

If you encounter issues with your graphics card, consider the following:

- **System Crashes or Artifacting:**
  - Ensure all power cables, especially the 12VHPWR connector, are fully seated and not bent. Improper connection can lead to instability.
  - Update your graphics drivers to the latest version. Perform a clean installation if issues persist.
  - Check for the

Ask a question about this manual

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Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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