ZOTAC ZT-B50700J-10P

ZOTAC Gaming GeForce RTX 5070 Solid OC Graphics Card User Manual

Model: **ZT-B50700J-10P** | Brand: **ZOTAC**

1. Introduction

This manual provides essential instructions for the installation, operation, and maintenance of your ZOTAC Gaming GeForce RTX 5070 Solid OC graphics card. Designed for high-performance computing and gaming, this card features the NVIDIA Blackwell architecture, DLSS 4, and advanced IceStorm 2.0 cooling. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.



The ZOTAC Gaming GeForce RTX 5070 Solid OC graphics card shown alongside its retail packaging, highlighting the product's design and branding.

2. Safety Information

Observe the following safety precautions during installation and operation:

- **Static Electricity:** Always ground yourself before handling the graphics card to prevent electrostatic discharge (ESD), which can damage electronic components. Use an anti-static wrist strap if available.
- **Power Disconnection:** Ensure your computer system is completely powered off and unplugged from the wall outlet before installing or removing the graphics card.
- **Ventilation:** Ensure adequate airflow within your PC case. Poor ventilation can lead to overheating and reduced performance or component lifespan.
- **Power Supply:** A minimum 650-watt power supply is recommended for stable operation. Ensure your power supply has the necessary 12v-2x6 connector.
- **Handling:** Hold the graphics card by its edges or the metal bracket. Avoid touching the gold-plated PCI Express connector or other sensitive components.

3. Package Contents

Verify that all items are present in your ZOTAC Gaming GeForce RTX 5070 Solid OC package:

- ZOTAC GAMING GeForce RTX 5070 SOLID OC graphics card
- GPU Support Stand
- 2x 8-pin-to-16-pin power cable
- User Manual
- Quick Start Guide



Contents of the ZOTAC Gaming GeForce RTX 5070 Solid OC package, showing the graphics card, GPU support stand, 2x 8-pin-to-16-pin power cable, user manual, and quick start guide.

4. Setup and Installation

4.1. Physical Installation

1. **Prepare Your System:** Power off your computer and unplug all cables. Open your PC case.
2. **Locate PCIe Slot:** Identify an available PCI Express 5.0 x16 slot on your motherboard. Remove any expansion slot covers that obstruct the slot.
3. **Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. A click from the slot's retention clip indicates proper seating.
4. **Secure Card:** Fasten the graphics card to the PC case using the screw(s) from the expansion slot.
5. **Install GPU Support Stand:** If desired, install the included GPU support stand to prevent sag. Follow the instructions provided in the Quick Start Guide for proper installation.

4.2. Power Connection

The ZOTAC Gaming GeForce RTX 5070 Solid OC requires a 12v-2x6 power input. Use the provided 2x 8-pin-to-16-pin cable if your power supply does not have a native 12v-2x6 connector.

1. Connect the 12v-2x6 connector from your power supply (or the adapter cable) to the corresponding port on the graphics card. Ensure the connection is firm and fully seated.
2. **12VHPWR Safety Light:** The graphics card features a 12VHPWR safety light. A **green light** indicates the connection is secure and properly powered. A **red light** indicates an improper or insufficient power connection; check all connections and ensure your power supply meets the recommended wattage.



Front view of the ZOTAC Gaming GeForce RTX 5070 Solid OC graphics card, showcasing its triple fan cooling system with BladeLink fans for efficient heat dissipation.

4.3. Driver Installation

1. **Power On:** Close your PC case, reconnect all cables, and power on your computer.
2. **Initial Display:** Your system may boot with a basic display driver.
3. **Download Drivers:** Visit the official NVIDIA website (www.nvidia.com/drivers) or the ZOTAC support page (www.zotac.com/support) to download the latest Game Ready or Studio drivers for your GeForce RTX 5070.
4. **Install Drivers:** Follow the on-screen instructions to install the drivers. A restart may be required.

4.4. ZOTAC GAMING FireStorm Utility

The ZOTAC GAMING FireStorm Utility allows you to monitor your graphics card, adjust fan speeds, and customize SPECTRA RGB lighting. Download the utility from the ZOTAC website for full control over your card's features.



Screenshot of the ZOTAC GAMING FireStorm Utility software interface, showing options for fan speed control and system monitoring.

5. Operating Instructions

5.1. Connecting Displays

The ZOTAC Gaming GeForce RTX 5070 Solid OC supports up to four displays simultaneously. It features:

- 3 x DisplayPort 2.1b with UHBR20 (up to 4K 480Hz or 8K 165Hz with DSC)
- 1 x HDMI® Connector (Supports 4K 480Hz HDR or 8K 120Hz HDR with DSC, and Gaming VRR as specified

in the HDMI 2.1b Specification)

Connect your monitor(s) to the appropriate ports on the graphics card. Ensure your display cables are securely connected.



Close-up of the ZOTAC Gaming GeForce RTX 5070 Solid OC's display output ports, including three DisplayPort 2.1b connectors and one HDMI 2.1b connector, supporting multiple high-resolution displays.

5.2. Key Features

- **NVIDIA Blackwell Architecture:** Experience enhanced performance and efficiency with NVIDIA's latest GPU architecture.
- **NVIDIA DLSS 4:** Utilize AI-powered upscaling to boost frame rates and generate sharp, high-quality images in supported games and applications.
- **IceStorm 2.0 Cooling:** An advanced cooling system featuring triple 90mm BladeLink fans, composite heatpipes, and a pass-thru airflow design to maintain optimal temperatures. The FREEZE fan stop feature intelligently halts fans during low load for silent operation.
- **SPECTRA RGB Lighting:** Customize the aesthetic of your graphics card with vibrant RGB lighting effects through the FireStorm Utility.



Diagram illustrating the IceStorm 2.0 advanced cooling system of the ZOTAC Gaming GeForce RTX 5070 Solid OC, detailing FREEZE fan stop, composite heat pipes, BladeLink fans, and a full-length heatsink with pass-thru airflow.

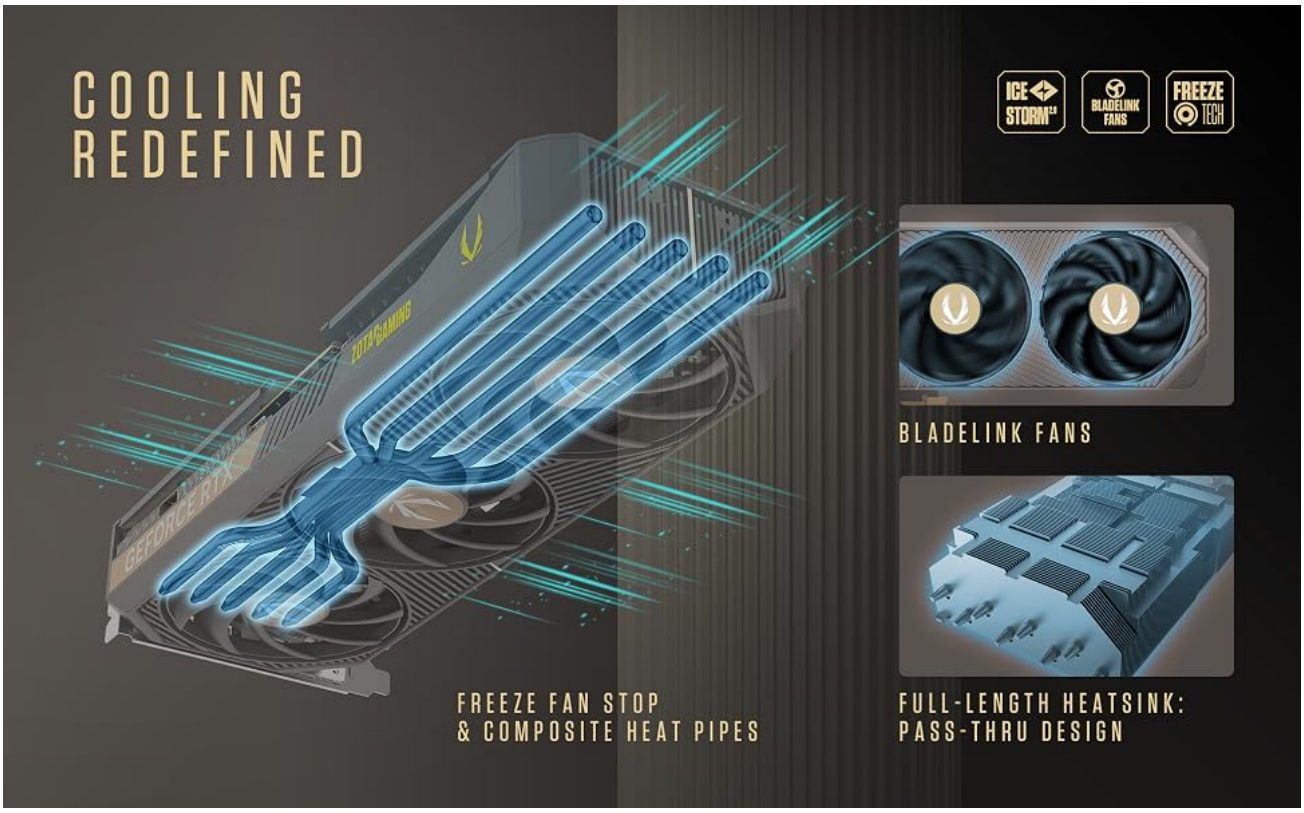


Image highlighting the durability features and SPECTRA RGB lighting of the ZOTAC Gaming GeForce RTX 5070 Solid OC, including its metal backplate and SFF-ready design.

6. Maintenance

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

- **Cleaning:** Periodically clean the fans and heatsink to remove dust buildup. Use compressed air to gently blow dust out of the fins and fan blades. Ensure the system is powered off and unplugged before cleaning. Do not use liquid cleaners.
- **Driver Updates:** Regularly check for and install the latest NVIDIA drivers. Driver updates often include performance improvements, bug fixes, and compatibility enhancements for new games and applications.
- **Software Updates:** Keep the ZOTAC GAMING FireStorm Utility updated to access the latest features and ensure compatibility.

7. Troubleshooting

If you encounter issues with your graphics card, refer to the following common troubleshooting steps:

- **No Display Output:**
    - Ensure the monitor cable is securely connected to both the graphics card and the monitor.
    - Verify the graphics card is fully seated in the PCIe slot.
    - Check the 12VHPWR safety light for a green indication. If red, re-seat the power cable.
    - Test with a different display cable or monitor if possible.
- **System Not Booting/Crashing:**
    - Ensure your power supply meets the recommended 650-watt requirement.
    - Verify all power connections to the graphics card are secure.

- Check for any loose components inside the PC case.

- **Performance Issues/Low Frame Rates:**
  - Ensure you have the latest NVIDIA drivers installed.
  - Check in-game settings and ensure they are appropriate for your system.
  - Monitor GPU temperatures using the FireStorm Utility or other software. High temperatures can lead to thermal throttling.
  - Ensure your system's CPU and RAM are not bottlenecking the GPU.

- **Driver Installation Problems:**
  - Uninstall previous graphics drivers using a utility like Display Driver Uninstaller (DDU) in Safe Mode, then attempt a clean installation of the latest drivers.

For further assistance, refer to the ZOTAC support website or contact technical support.

8. Specifications

Feature	Specification
GPU	NVIDIA GeForce RTX 5070
CUDA Cores	6144
Video Memory	12GB GDDR7
Memory Bus	192-bit
Engine Boost Clock	2542 MHz
Memory Clock	28 Gbps
PCI Express	5.0 x16
Display Outputs	3 x DisplayPort 2.1b, 1 x HDMI 2.1b
HDCP Support	2.3
Multi-Display Support	Up to 4 displays simultaneously
Recommended Power Supply	650-watt
Power Consumption	250-watt max
Power Input	1 x 12v-2x6
Product Dimensions (L x H x W)	304.4 mm (12 in) x 115.8 mm (4.6 in) x 41.6 mm (1.6 in) (2 slot)
Item Weight	2.45 pounds
OS Support	Windows 11 / Windows 10 64-bit (v1809 November 2018 or later)

9. Warranty and Support

For warranty information, technical support, or general inquiries regarding your ZOTAC Gaming GeForce RTX 5070 Solid OC graphics card, please visit the official ZOTAC support page:

www.zotac.com/support

ZOTAC provides dedicated customer support and maintains online communities for user assistance and information.



Dedicated Customer Support



Online Communities

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

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.

Submit question