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› [ZOTAC Gaming GeForce RTX 3050 6GB GDDR6 Solo Graphics Card User Manual \(Model ZT-A30510G-10L\)](#)

## ZOTAC ZT-A30510G-10L

# ZOTAC Gaming GeForce RTX 3050 6GB GDDR6 Solo Graphics Card User Manual

Model: ZT-A30510G-10L | Brand: ZOTAC

## 1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your ZOTAC Gaming GeForce RTX 3050 6GB GDDR6 Solo graphics card. This super compact graphics card is built on the NVIDIA Ampere architecture, featuring enhanced RT Cores and Tensor Cores, streaming multiprocessors, and GDDR6 memory for optimized gaming performance.



Figure 1: ZOTAC Gaming GeForce RTX 3050 6GB GDDR6 Solo Graphics Card and Retail Packaging

## 2. KEY FEATURES

- NVIDIA Ampere Architecture: Incorporates 2nd Gen Ray Tracing Cores and 3rd Gen Tensor Cores for advanced graphics.
- Memory: Equipped with 6GB 96-bit GDDR6 memory, operating at 14 Gbps.
- Compact Design: Features a super compact, dual-slot design that fits in 99% of available PC cases.
- Power Efficiency: PCIe Bus Powered with a 70-watt max power consumption.
- Display Support: 8K Ready, supports up to 4 displays simultaneously via 3 x DisplayPort 1.4a and 1 x HDMI 2.1 connectors.
- Software Compatibility: Supports Game Ready and NVIDIA Studio Drivers, PCI Express® Gen 4, Microsoft DirectX® 12 Ultimate, Vulkan API, OpenGL 4.6, and Windows 11 / Windows 10 64-bit.

### 3. PACKAGE CONTENTS

Verify that all items are present in your product package:

- ZOTAC GAMING GeForce RTX 3050 6GB GDDR6 Solo graphics card
- User Manual (this document)

### 4. TECHNICAL SPECIFICATIONS

Specification	Detail
Graphics Coprocessor	NVIDIA GeForce RTX 3050
Memory Size	6 GB GDDR6
Memory Bus	96-bit
Memory Clock	14.0 Gbps
Engine Boost Clock	1470 MHz
CUDA Cores	2304
PCI Express	4.0 x8
Video Output Interface	3 x DisplayPort 1.4a, 1 x HDMI 2.1
Max Screen Resolution	7680x4320
HDCP Support	2.3
Max Power Consumption	70-watt
Recommended PSU	450-watt
Dimensions (Length)	150.8 mm (5.9 in)
Dimensions (Height)	115.1 mm (4.5 in)
Dimensions (Width)	2 slot (39.2 mm / 1.5 in)

### 5. SETUP

## 5.1. Physical Installation

- 1. Power Off and Disconnect:** Ensure your computer is completely powered off and unplugged from the wall outlet.
- 2. Open PC Case:** Remove the side panel of your computer case to access the motherboard.
- 3. Locate PCIe Slot:** Identify an available PCI Express 4.0 x8 or x16 slot on your motherboard.
- 4. Remove Slot Covers:** Remove the necessary expansion slot covers from the back of your PC case that correspond to the chosen PCIe slot. This graphics card occupies two slots.
- 5. Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. You should hear a click from the slot's retention clip.



Figure 2: Top view of the ZOTAC Gaming GeForce RTX 3050 Graphics Card, showing the cooling fans.

- 6. Secure Graphics Card:** Fasten the graphics card to the PC case using the screws from the removed slot covers.
- 7. Connect Power:** Connect the 6-pin PCIe power connector from your power supply unit (PSU) to the graphics card. A 450-watt PSU is recommended.



Figure 3: Angled view of the ZOTAC Gaming GeForce RTX 3050 Graphics Card, highlighting the 6-pin power connector.

8. **Close PC Case:** Replace the side panel of your computer case.
9. **Connect Display:** Connect your monitor(s) to the graphics card's DisplayPort or HDMI outputs.

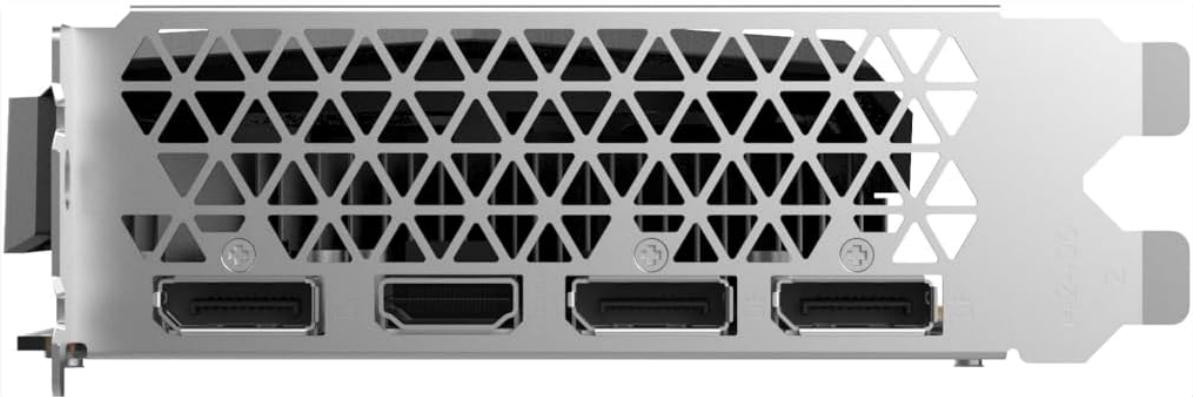


Figure 4: Rear view of the ZOTAC Gaming GeForce RTX 3050 Graphics Card, showing the DisplayPort and HDMI outputs.

## 5.2. Driver Installation

1. **Power On:** Reconnect your computer to the power outlet and turn it on.
2. **Download Drivers:** Visit the official NVIDIA website ([www.nvidia.com/drivers](http://www.nvidia.com/drivers)) to download the latest Game Ready or Studio Drivers for your GeForce RTX 3050 graphics card.
3. **Install Drivers:** Follow the on-screen instructions to complete the driver installation. Restart your computer if prompted.

## 6. OPERATING YOUR GRAPHICS CARD

Once installed and drivers are updated, your ZOTAC Gaming GeForce RTX 3050 is ready for use. It supports up to four displays simultaneously. Connect your monitors to the available DisplayPort 1.4a or HDMI 2.1 ports. For optimal performance in gaming, ensure your display settings match the capabilities of your monitor and graphics card.

- **Single Monitor Setup:** Connect your primary monitor to any available port.
- **Multi-Monitor Setup:** Connect additional monitors to the remaining ports. Configure display settings within your operating system (e.g., Windows Display Settings) to extend or duplicate your desktop.
- **High Refresh Rate/Resolution:** Utilize DisplayPort 1.4a or HDMI 2.1 for 4K 120Hz HDR or 8K 60Hz HDR experiences, if supported by your monitor.

## 7. MAINTENANCE

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- **Driver Updates:** Regularly check the NVIDIA website for the latest driver updates to ensure optimal performance and compatibility with new games and software.
- **Cleaning:** Periodically clean the graphics card fans and heatsink to prevent dust buildup, which can affect cooling efficiency. Use compressed air and ensure the system is powered off before cleaning.
- **System Airflow:** Ensure your PC case has adequate airflow to help dissipate heat generated by the graphics card.

## 8. TROUBLESHOOTING

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- **No Display Output:** Ensure the graphics card is fully seated in the PCIe slot and the power connector is securely attached. Verify that your monitor is connected to the graphics card and not the motherboard's integrated graphics ports.
- **Driver Issues:** If you experience display artifacts or crashes, try reinstalling the latest graphics drivers. You may need to use a driver uninstaller utility to completely remove old drivers first.
- **Performance Problems:** Check that your power supply meets the recommended 450-watt requirement. Ensure your PC case has good airflow to prevent thermal throttling. Verify game settings are appropriate for your system.
- **System Instability:** If your system is unstable after installation, ensure all components are properly seated and connected. Check for any BIOS/UEFI updates for your motherboard.

## 9. WARRANTY AND SUPPORT

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For customer service, technical support, or general inquiries regarding your ZOTAC Gaming GeForce RTX 3050 graphics card, please visit the dedicated support page at [www.zotac.com/support](http://www.zotac.com/support).

**Warranty Information:** Product warranty or service will not be extended if:

- The product is repaired, modified, or altered, unless such repair, modification, or alteration is authorized in writing by ZOTAC Technology Limited.
- The serial number of the product is damaged or missing.
- The customer does not complete the product registration within 28 days of the purchase date.



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# QUICK INSTALLATION GUIDE



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Figure 5: Excerpt from the ZOTAC Quick Installation Guide, detailing product registration and warranty terms.