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ZOTAC ZT-A30600H-10M

ZOTAC Gaming GeForce RTX 3060 Twin Edge OC Graphics Card User Manual

Model: ZT-A30600H-10M

1. Introduction

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your ZOTAC Gaming GeForce RTX 3060 Twin Edge OC graphics card. Please read this manual thoroughly before installation to ensure proper setup and optimal performance. Retain this manual for future reference.

2. Product Overview

The ZOTAC Gaming GeForce RTX 3060 Twin Edge OC is a high-performance graphics card designed for gaming and creative applications. It features the NVIDIA Ampere architecture, offering enhanced Ray Tracing Cores and Tensor Cores for realistic graphics and AI acceleration.

Key Features:

- NVIDIA Ampere Architecture: 2nd Gen Ray Tracing Cores, 3rd Gen Tensor Cores.
- 12GB GDDR6 Memory: 192-bit memory bus, 15 Gbps memory clock.
- Boost Clock: 1807 MHz.
- PCI Express 4.0 Interface.
- IceStorm 2.0 Advanced Cooling: Efficient thermal management.
- Active Fan Control & Freeze Fan Stop: Optimized fan operation for quietness and longevity.
- Metal Backplate: Provides structural rigidity and protection.
- Display Outputs: 3 x DisplayPort 1.4a, 1 x HDMI 2.1.
- 8K Ready, 4 Display Ready, HDCP 2.3, VR Ready.



Image: Front view of the ZOTAC Gaming GeForce RTX 3060 Twin Edge OC graphics card, showcasing its dual-fan design.

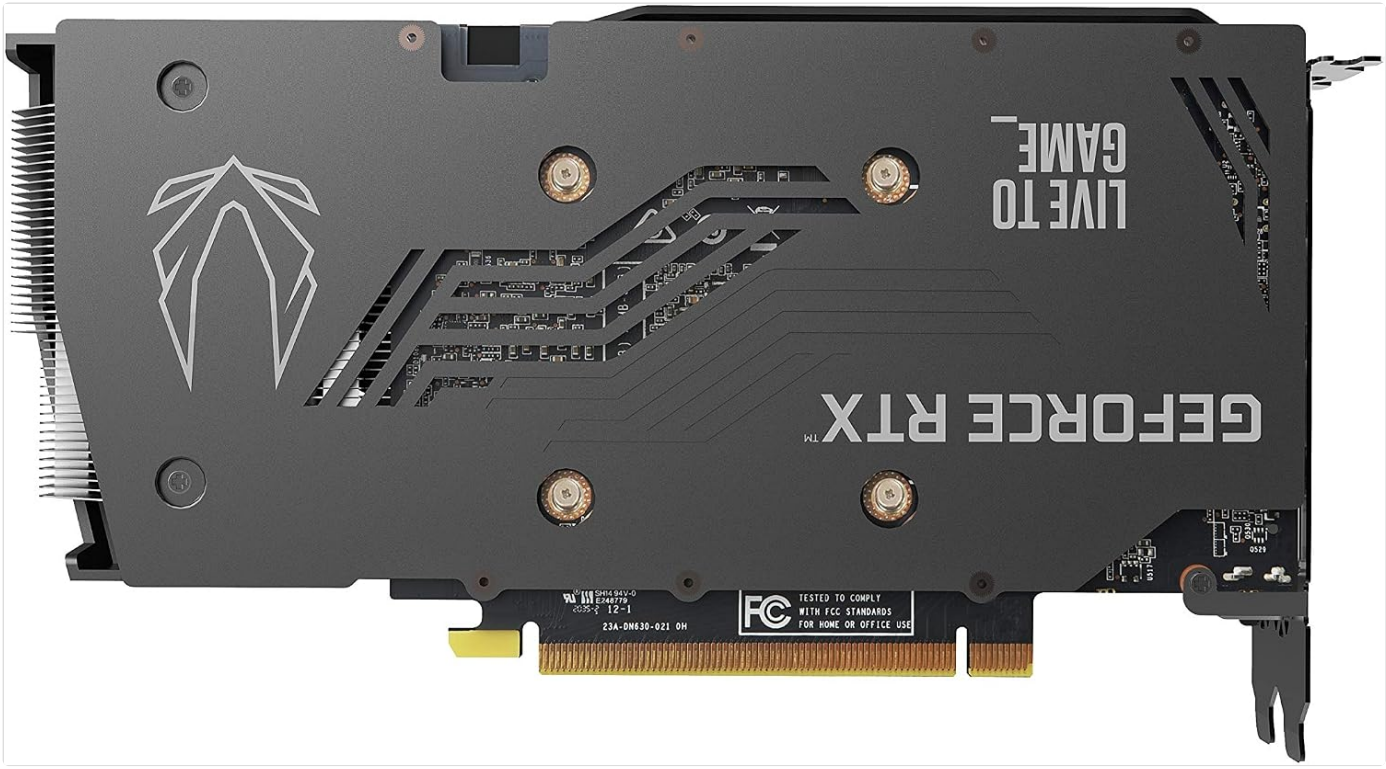


Image: Rear view of the ZOTAC Gaming GeForce RTX 3060 Twin Edge OC graphics card, highlighting the protective metal backplate.

Cooling System: IceStorm 2.0

The IceStorm 2.0 cooling system is engineered for efficient heat dissipation, ensuring stable performance even under heavy loads. It features a wide array aluminum heatsink and 11-blade fans.

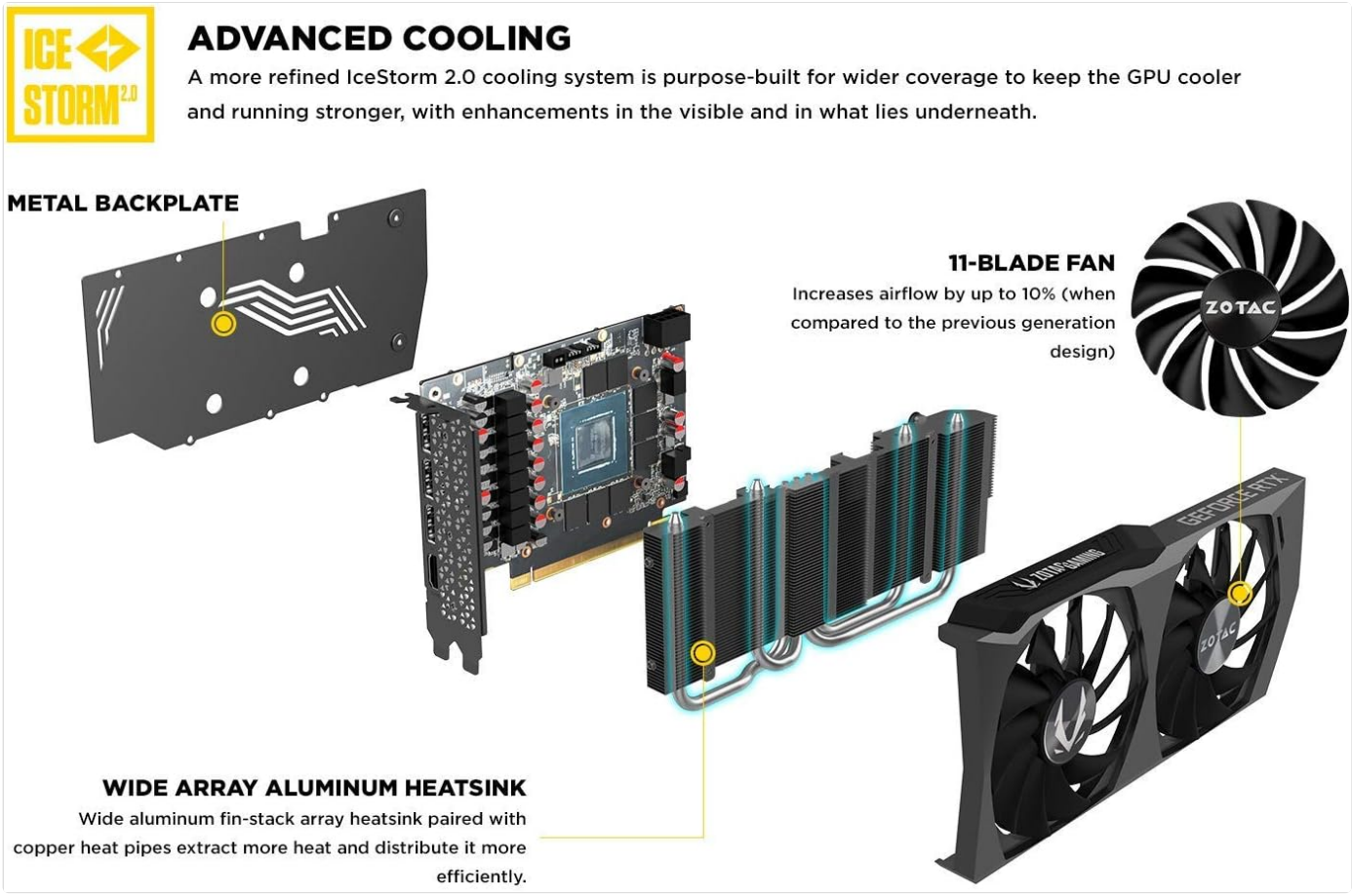


Image: Diagram illustrating the components of the IceStorm 2.0 advanced cooling system, including the heatsink and fan design.

Active Fan Control and Freeze Fan Stop

Active Fan Control allows users to adjust fan rotations independently for optimal airflow. The Freeze Fan Stop feature automatically halts fan operation when the GPU is idle, reducing noise and extending fan lifespan.

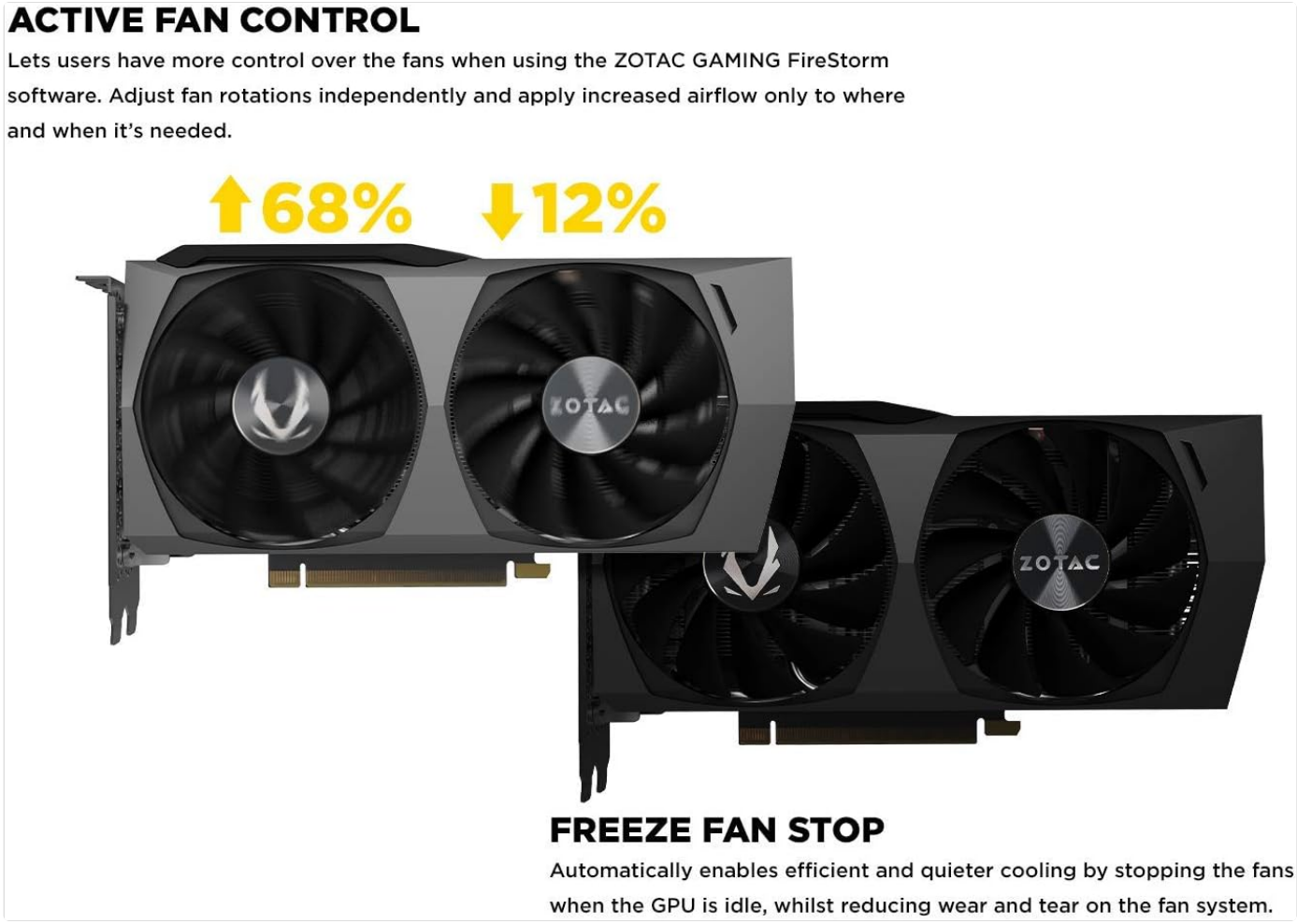


Image: Visual representation of Active Fan Control and Freeze Fan Stop features, showing fan speed adjustments and fan stop functionality.

3. Setup

System Requirements:

- PCI Express-compliant motherboard with one dual-width x16 graphics slot.
- Minimum 600-watt power supply with one 8-pin PCIe power connector.
- Microsoft Windows 10 64-bit (build 2004 or later) or Linux 64-bit operating system.
- Minimum 8GB system memory (16GB recommended).

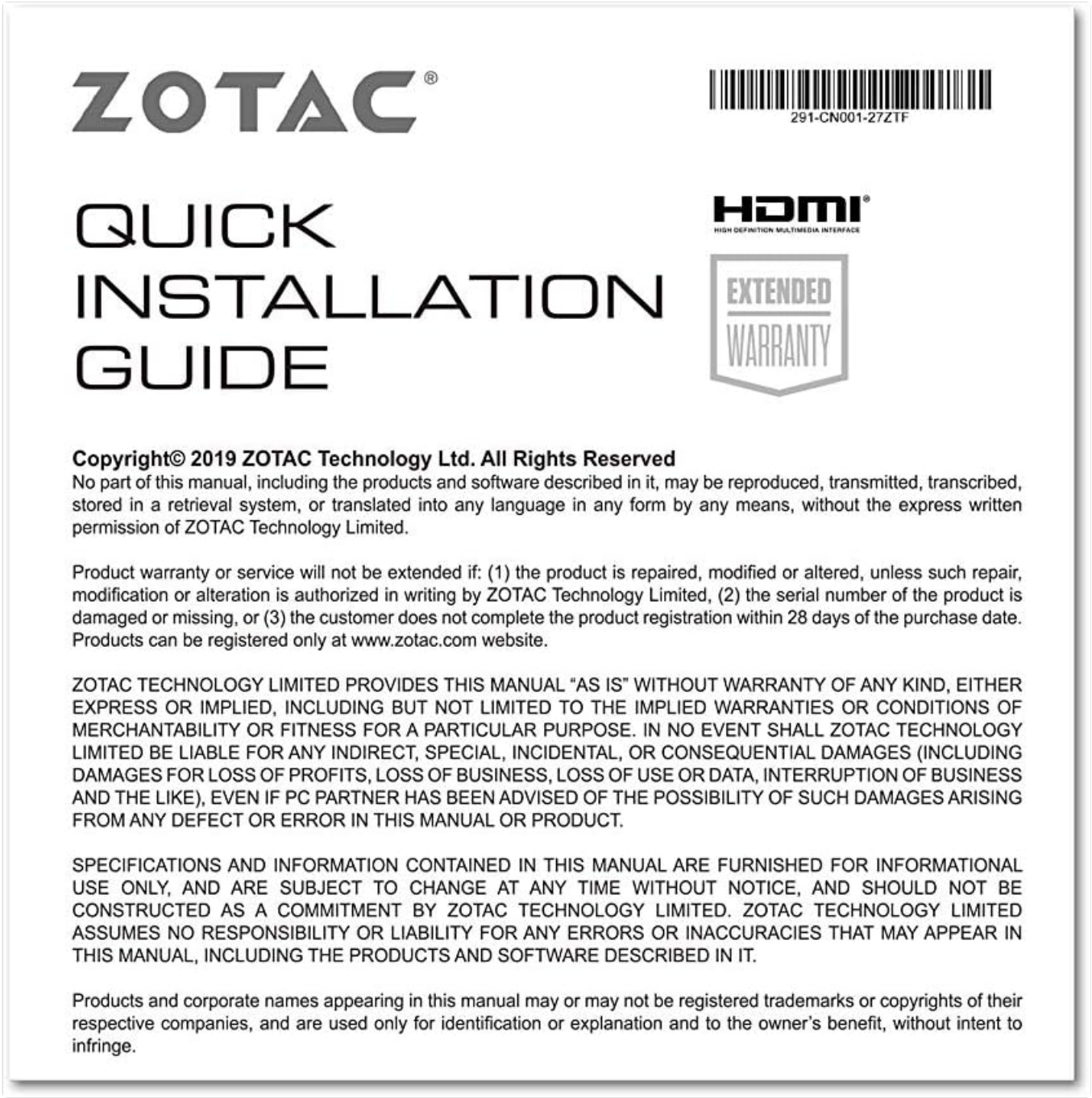
Installation Steps:

1. **Prepare Your System:** Power off your computer and disconnect all cables. Open your computer case.
2. **Locate PCIe Slot:** Identify an available PCI Express x16 slot on your motherboard. This card requires a dual-width slot.
3. **Remove Slot Covers:** Remove the two slot covers from the back of your computer case corresponding to the chosen PCIe slot.
4. **Install Graphics Card:** Carefully align the graphics card with the PCIe slot and press it firmly until it is securely seated. Ensure the retention clip on the motherboard engages.
5. **Secure the Card:** Fasten the graphics card to the computer case using screws.
6. **Connect Power:** Connect the 8-pin PCIe power connector from your power supply to the graphics card. Ensure a secure connection.

7. **Close Case and Connect Peripherals:** Close your computer case. Connect your display cable(s) to the graphics card's output ports (DisplayPort or HDMI). Reconnect all other cables and power on your computer.
8. **Install Drivers:** Once your operating system loads, install the latest NVIDIA drivers from the official NVIDIA website (www.nvidia.com/drivers) or the ZOTAC website (www.zotac.com/support).



Image: Rear view of the graphics card showing the DisplayPort and HDMI output connectors.


ZOTAC®

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QUICK INSTALLATION GUIDE

HDMI HIGH DEFINITION MULTIMEDIA INTERFACE

EXTENDED WARRANTY

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Image: Cover of the ZOTAC Quick Installation Guide, included with the product.

4. Operating

Driver Installation:

After physical installation, it is crucial to install the correct drivers for your graphics card. Visit the official NVIDIA website or ZOTAC support page to download the latest Game Ready Drivers or NVIDIA Studio Drivers. Follow the on-screen instructions for a clean installation.

Software Compatibility:

- Game Ready Drivers and NVIDIA Studio Drivers
- Microsoft DirectX 12 Ultimate
- Vulkan RT API
- OpenGL 4.6

- Windows 10 64-bit (build 2004 or later)

ZOTAC FireStorm Utility:

For advanced control and monitoring, ZOTAC offers the FireStorm utility. This software allows you to:

- Monitor GPU temperature, clock speeds, and fan speeds.
- Adjust fan curves and utilize Active Fan Control.
- Customize RGB lighting (if applicable).
- Overclock the GPU for increased performance (use with caution).

Download the FireStorm utility from the ZOTAC website.

5. Maintenance

Cleaning:

- Regularly clean dust from the graphics card fans and heatsink using compressed air. Ensure the computer is powered off and unplugged before cleaning.
- Hold the fan blades gently to prevent them from spinning rapidly during cleaning, which can damage the fan bearings.
- Avoid using liquid cleaners directly on the card.

Driver Updates:

Keep your graphics drivers updated to ensure optimal performance, stability, and compatibility with the latest games and applications. Check the NVIDIA or ZOTAC website periodically for new driver releases.

Environmental Conditions:

- Ensure adequate airflow within your computer case to prevent overheating.
- Operate the graphics card within recommended temperature ranges.

6. Troubleshooting

No Display Output:

- Ensure the display cable is securely connected to both the graphics card and the monitor.
- Verify that the monitor is powered on and set to the correct input source.
- Check if the graphics card is properly seated in the PCIe slot.
- Confirm that the 8-pin PCIe power connector is securely attached to the graphics card.
- Test with a different display cable or monitor if possible.

System Instability or Crashes:

- Ensure your power supply meets the minimum 600-watt requirement.
- Update your graphics drivers to the latest version. Perform a clean installation if issues persist.
- Monitor GPU temperatures using the ZOTAC FireStorm utility or other monitoring software. Excessive heat can cause instability.

- Check for other hardware conflicts or outdated motherboard BIOS.

Fan Noise or Malfunction:

- Clean dust from the fans and heatsink.
- Use the ZOTAC FireStorm utility to adjust fan curves.
- If a fan is physically damaged or making unusual noises, contact ZOTAC support.

Poor Performance:

- Ensure you have the latest graphics drivers installed.
- Check in-game settings and reduce graphics quality if necessary.
- Verify that your system meets the recommended specifications for the games/applications you are running.
- Monitor GPU utilization and clock speeds to ensure the card is operating as expected.

7. Specifications

Feature	Specification
GPU	NVIDIA GeForce RTX 3060
CUDA Cores	3584
Video Memory	12GB GDDR6
Memory Bus	192-bit
Engine Boost Clock	1807 MHz
Memory Clock	15.0 Gbps
PCI Express	4.0 16x
Display Outputs	3 x DisplayPort 1.4a, 1 x HDMI 2.1
HDCP Support	2.3
Multi Display Capability	Quad Display Capable
Recommended Power Supply	600W
Power Consumption	170W
Power Input	8-pin
Card Dimensions (L x H x W)	224.1mm (8.8in) x 116.3mm (4.6in) x 39.2mm (1.5in) (Dual Slot)
Weight	907 g



Image: Diagram showing the physical dimensions of the ZOTAC Gaming GeForce RTX 3060 Twin Edge OC graphics card.

8. Warranty and Support

Warranty Information:

This ZOTAC Gaming GeForce RTX 3060 Twin Edge OC graphics card comes with a standard **2-year warranty**. Please refer to the official ZOTAC website for detailed warranty terms and conditions, including information on product registration for extended warranty options where applicable.

Technical Support:

For customer service, technical support, or general inquiries, please visit the dedicated support page on the ZOTAC website:

www.zotac.com/support

The support page offers FAQs, driver downloads, and contact information for further assistance.

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Details

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