

## Thermaltake AC-053-CN1OTN-C1

# Thermaltake TT Gaming Riser PCI-E 3.0 Cable (AC-053-CN1OTN-C1)

Instruction Manual

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## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your Thermaltake TT Gaming Riser PCI-E 3.0 Cable. This cable is designed to extend the PCI-E slot, allowing for flexible placement of your graphics card within a PC chassis, often for vertical mounting or improved airflow. Please read this manual thoroughly before installation to ensure proper usage and optimal performance.

## 2. FEATURES

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- **GPU Solution Support:** Supports a wide range of GPU solutions and is compatible with various gaming chassis.
- **High-Speed Cable:** Engineered for rapid data transmission, expanding bandwidth up to 8 GBps.
- **EMI Shielding:** Features electromagnetic interference (EMI) shielding with conductive materials to protect against incoming or outgoing electromagnetic frequencies.
- **Durable Construction:** Designed for long-lasting use and easy installation.
- **Signal Integrity:** Utilizes powerful PCBs at each end to minimize signal loss and ensure precise signal transmission.

## 3. PRODUCT OVERVIEW

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The Thermaltake TT Gaming Riser PCI-E 3.0 Cable is a flexible extension cable that connects a PCI-E graphics card to a motherboard's PCI-E slot. It allows for alternative mounting positions for your GPU, enhancing aesthetic

appeal and potentially improving thermal performance in compatible cases.



Figure 3.1: Top view of the Thermaltake TT Gaming Riser PCI-E 3.0 Cable, showing its flexible design and connectors.



Figure 3.2: Front and back view of the riser cable, highlighting the PCI-E x16 connectors.



Figure 3.3: Close-up view of one end of the riser cable, showing the PCI-E x16 male connector.



Figure 3.4: The Thermaltake TT Gaming Riser PCI-E 3.0 Cable in its retail packaging.



Figure 3.5: An example installation of the riser cable, enabling vertical GPU mounting in a PC case.



Figure 3.6: Another view of the riser cable installed, demonstrating cable routing within the chassis.



Figure 3.7: The full length of the 200mm riser cable, illustrating its flexibility.

## 4. SETUP AND INSTALLATION

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Before beginning installation, ensure your computer is powered off and unplugged from the wall outlet. Always handle components with care and consider wearing an anti-static wrist strap to prevent electrostatic discharge (ESD).

1. **Prepare Your System:** Power down your PC completely and disconnect all cables. Open your PC case to access the motherboard and graphics card area.
2. **Remove Existing GPU (if applicable):** If your graphics card is currently installed directly into the motherboard, carefully unlatch it from the PCI-E slot and remove any retaining screws from the case. Gently pull the card straight out of the slot.
3. **Install Riser Cable to Motherboard:** Locate an available PCI-E x16 slot on your motherboard. Insert the male end of the Thermaltake TT Gaming Riser PCI-E 3.0 Cable firmly into this slot until it clicks into place. Ensure it is fully seated.
4. **Mount the Graphics Card:** Secure your graphics card to the female end of the riser cable. This typically involves aligning the GPU's PCI-E connector with the riser's slot and pushing it in until it's fully seated.
5. **Secure the GPU:** Depending on your PC case, you may need a vertical GPU mount or other bracket to securely hold the graphics card in its new position. Fasten the GPU to the case using appropriate screws or mechanisms.
6. **Connect Power:** Reconnect any necessary PCI-E power cables from your power supply to your graphics card.
7. **Cable Management:** Route the riser cable and other power cables neatly to ensure proper airflow and a clean build.
8. **Final Checks:** Close your PC case, reconnect all external cables (monitor, power, peripherals), and power on your system.

Your system should now recognize the graphics card through the riser cable. You may need to adjust BIOS settings to ensure the correct PCI-E generation is selected if your motherboard supports multiple versions (e.g., PCI-E 3.0, 4.0, or 5.0). For this specific cable, ensure your motherboard's PCI-E slot is configured for PCI-E 3.0 if not automatically detected.

## 5. OPERATING THE RISER CABLE

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The Thermaltake TT Gaming Riser PCI-E 3.0 Cable is a passive component designed to extend the PCI-E connection. Once correctly installed, it operates transparently, allowing your graphics card to function as if it were directly connected to the motherboard. No additional software or drivers are required for the riser cable itself. Ensure your graphics card drivers are up-to-date for optimal performance. Monitor your system's temperatures and performance to confirm stable operation after installation.

## 6. MAINTENANCE

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Proper maintenance ensures the longevity and reliability of your riser cable and connected components.

- **Regular Cleaning:** Periodically inspect the cable and connectors for dust buildup. Use compressed air to gently remove dust from the connectors and the cable itself.
- **Inspect Connections:** Ensure both ends of the riser cable remain firmly seated in their respective slots. Loose connections can lead to instability or performance issues.
- **Avoid Bending Excessively:** While the cable is flexible, avoid sharp or excessive bends that could damage the internal wiring or signal integrity.
- **Environmental Conditions:** Operate your PC in a clean, dry environment with stable temperatures to prevent

damage to electronic components.

## 7. TROUBLESHOOTING

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If you encounter issues after installing the Thermaltake TT Gaming Riser PCI-E 3.0 Cable, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
No display output	Loose connections, incorrect BIOS settings, faulty cable/GPU.	Ensure the riser cable and GPU are fully seated. Check monitor connections. Verify BIOS PCI-E slot generation setting (set to PCI-E 3.0 or Auto). Test GPU directly in motherboard slot.
System instability or crashes	Loose connections, power delivery issues, incompatible BIOS settings.	Check all power and data connections. Ensure your power supply can adequately power the GPU. Update motherboard BIOS and GPU drivers. Set PCI-E slot to PCI-E 3.0 manually in BIOS.
Reduced GPU performance	Incorrect PCI-E generation detected, signal degradation.	Confirm the PCI-E slot is operating at x16 3.0 speed in BIOS/OS utilities. Ensure the cable is not excessively bent or damaged.
GPU not detected	Improper installation, faulty cable/GPU.	Re-seat the riser cable and GPU. Test the GPU directly in the motherboard slot to rule out a GPU issue. Check motherboard manual for specific PCI-E slot activation.

## 8. SPECIFICATIONS

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- **Brand:** Thermaltake
- **Model Name:** AC-053-CN1OTN-C1
- **Cable Type:** PCI Express
- **Compatible Devices:** Graphics Card, Motherboard
- **Special Feature:** Braided
- **Connector Type:** PCIe
- **Data Transfer Speed:** 8 Gigabits per second
- **Number of Pins:** 80
- **Recommended Product Uses:** GPU installation and cable management in PC cases
- **Achieved Specifications:** TUV
- **Indoor/Outdoor Use:** Indoor
- **Number of Items:** 1
- **Color:** Black
- **Shape:** Flat
- **Item Length:** 200 Millimeters
- **Manufacturer:** Thermaltake GmbH
- **UPC:** 841163069554
- **Global Trade Identification Number:** 04717964409744
- **External Test Certification:** Not applicable
- **Product Type Name:** TT Gaming Riser PCI-E 3.0 Cable

- **External Material:** Plastic

## 9. WARRANTY AND SUPPORT

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The Thermaltake TT Gaming Riser PCI-E 3.0 Cable comes with a **2-year product warranty**. For warranty claims or technical support, please contact Thermaltake customer service or visit the official Thermaltake website. Ensure you retain your proof of purchase for warranty validation.

## 10. RELATED VIDEOS

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The following videos demonstrate aspects of PCI-E riser cable functionality and testing. Note that some videos may feature PCI-E 4.0 or 5.0 cables, while this product is PCI-E 3.0. The principles of installation and bandwidth testing remain relevant.

Video 10.1: PCI-E 4.0 X16 Speed Testing-1. This video demonstrates a speed test for a PCI-E 4.0 x16 riser cable, showing bandwidth performance. While this product is PCI-E 3.0, the testing methodology is similar.

Video 10.2: Speed of 52.43 GB/s - PCI-E 5.0 riser cable with RX 9070 and AMD 9950X3D. This video showcases the high bandwidth capabilities of a PCI-E 5.0 riser cable in a high-performance system.

Video 10.3: PCI-E 4.0 X16 Riser Cable Speed Testing-2. Another demonstration of PCI-E 4.0 x16 riser cable speed testing, providing further insight into performance metrics.

Video 10.4: Stress test - PCI-E 5.0 riser cable 1 meter twisted pretzel shape. This video shows a stress test on a PCI-E 5.0 riser cable, demonstrating its durability and signal integrity under unusual conditions.