

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

- › [EVGA](#) /
- › [EVGA GeForce RTX 3090 FTW3 Ultra Gaming Graphics Card User Manual](#)

### EVGA 24G-P5-3987-KR

# EVGA GeForce RTX 3090 FTW3 Ultra Gaming Graphics Card User Manual

Model: 24G-P5-3987-KR

## INTRODUCTION

---

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your EVGA GeForce RTX 3090 FTW3 Ultra Gaming graphics card. This high-performance graphics card is designed for demanding applications, offering advanced features such as 24GB GDDR6X memory, iCX3 Technology for enhanced cooling, and customizable ARGB LED lighting.



Figure 1: Front view of the EVGA GeForce RTX 3090 FTW3 Ultra Gaming Graphics Card.

## KEY FEATURES

---

- **iCX3 Technology:** Advanced cooling solution with triple HDB fans and 9 iCX3 thermal sensors for optimized performance and reduced acoustic noise.
- **Adjustable ARGB LED:** Customizable lighting for aesthetic integration into your system.
- **All-Metal Backplate:** Pre-installed for structural rigidity and additional cooling.
- **24GB GDDR6X Memory:** High-speed memory for demanding graphics tasks and gaming.
- **Real-Time Ray Tracing:** Enhanced graphics realism in supported games.
- **PCI Express Gen 4:** High-bandwidth interface for optimal data transfer.
- **Digital Max Resolution:** Supports up to 7680 x 4320.



Figure 2: Overview of iCX3 Interactive Cooling.



Figure 3: Detailed explanation of iCX3 Technology features.

## SETUP

### 1. System Requirements

Before installation, ensure your system meets the following minimum requirements:

- PCI Express-compliant motherboard with one x16 graphics slot.
- Minimum 750W power supply with three available 8-pin PCIe power connectors. A 1200W PSU or higher is recommended for optimal performance and stability, especially under heavy load.
- Sufficient space within your PC case for a triple-slot graphics card (dimensions: 15.1 x 12 x 5 inches). Consider a GPU support bracket due to the card's weight (approximately 4.65 pounds).
- Operating system: Windows 10 64-bit or later.

### 2. 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 x16 slot on your motherboard.
3. **Install the card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip locks into place.
4. **Secure the card:** Use screws to fasten the graphics card to the PC case at the rear I/O panel.
5. **Connect power:** Connect three 8-pin PCIe power cables from your power supply to the corresponding ports on the graphics card. Ensure all connections are firm.
6. **Install support bracket (recommended):** Due to the card's size and weight, installing a GPU support bracket is highly recommended to prevent sag and potential damage to the PCIe slot.

# EVGA

## GEFORCE<sup>®</sup> GTX GEFORCE<sup>®</sup> RTX

Installation Guide

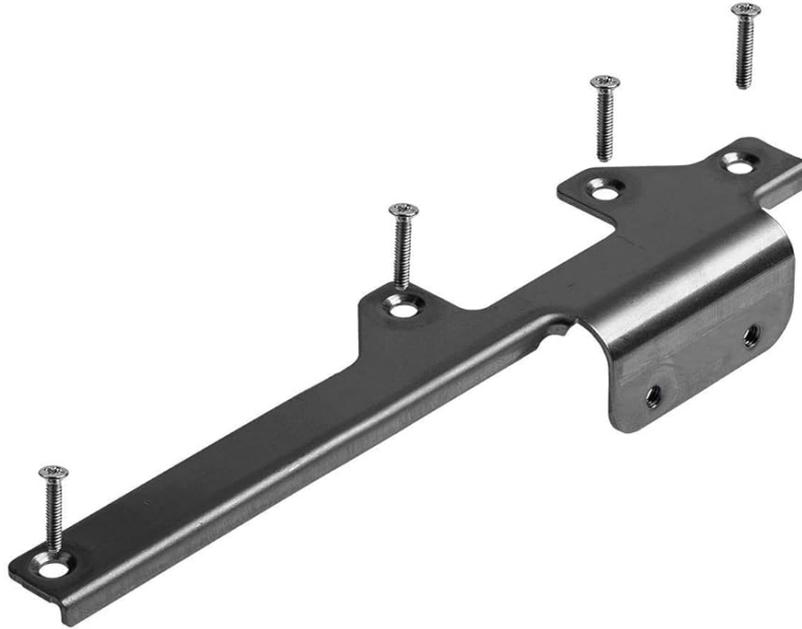


Figure 4: Display output ports (DisplayPort and HDMI) and exhaust vents.



Figure 5: Example of a GPU support bracket for installation.

### 3. Driver and Software Installation

1. **Power on:** Close your PC case, reconnect all cables, and power on your computer.
2. **Install NVIDIA drivers:** Download the latest NVIDIA GeForce drivers for the RTX 3090 from the official NVIDIA website. Follow the on-screen instructions for a clean installation.
3. **Install EVGA Precision X1:** Download and install EVGA Precision X1 software from the official EVGA website. This utility allows for monitoring, overclocking, and customizing the ARGB lighting and fan curves of your graphics card.

## OPERATING

---

Once installed and drivers are updated, your EVGA GeForce RTX 3090 FTW3 Ultra Gaming graphics card is ready for use. It will automatically handle graphics processing for your applications and games.

### ARGB LED Customization

The graphics card features adjustable ARGB LED lighting. You can customize the lighting effects, colors, and patterns using the EVGA Precision X1 software. This allows you to synchronize the card's lighting with other ARGB components in your system.



Figure 6: Graphics card with ARGB LEDs illuminated.



Figure 7: Angled view of the graphics card with ARGB LEDs illuminated.

## MAINTENANCE

---

### 1. Cleaning

Regular cleaning helps maintain optimal performance and longevity. Periodically, with the system powered off and unplugged:

- Use compressed air to remove dust from the fans, heatsink fins, and other components of the graphics card.
- Wipe the exterior surfaces with a soft, lint-free cloth. Avoid using harsh chemicals or abrasive materials.

### 2. Fan Curve Adjustment

The EVGA GeForce RTX 3090 FTW3 Ultra Gaming features advanced cooling. However, for users seeking to optimize thermal performance or reduce noise, adjusting the fan curve is recommended. The default fan curve may allow temperatures to reach up to 90°C before maximum fan speeds are engaged. Using EVGA Precision X1, you can create a more aggressive fan curve to maintain lower operating temperatures (e.g., mid-70s °C) under load, which can contribute to better long-term stability and performance.

### 3. Thermal Management

Ensure adequate airflow within your PC case. Proper case ventilation, including intake and exhaust fans, is crucial for dissipating heat generated by high-performance components like the RTX 3090. Insufficient airflow can lead to higher operating temperatures for the GPU and its memory modules, potentially affecting performance and lifespan.

## TROUBLESHOOTING

---

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

- **No Display/Black Screen:**

- Ensure the graphics card is fully seated in the PCIe slot.
- Verify that all three 8-pin PCIe power connectors are securely attached to the card and the power supply.
- Check that your monitor cable is connected to the graphics card's output ports, not the motherboard's integrated graphics ports.
- Test with a different display cable or monitor if possible.

- **System Instability/Crashes:**

- Ensure your power supply unit (PSU) meets the recommended wattage (minimum 750W, 1200W or higher recommended for stability under load). Insufficient power can cause instability.
- Update your graphics drivers to the latest version. Perform a clean installation if issues persist.
- Monitor GPU temperatures using EVGA Precision X1 or similar software. High temperatures can lead to throttling or crashes. Improve case airflow if temperatures are consistently high.

- **Fan Noise/Overheating:**

- Clean dust from the fans and heatsink.
- Adjust the fan curve in EVGA Precision X1 for more aggressive cooling.
- Ensure proper case airflow. Consider adding or repositioning case fans.
- Note that the card can generate significant heat under load, and effective case cooling is essential.

- **ARGB LED Issues:**

- Ensure EVGA Precision X1 software is installed and running.
- Check for software updates for EVGA Precision X1.

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

## SPECIFICATIONS

Feature	Detail
Model Number	24G-P5-3987-KR
Graphics Coprocessor	NVIDIA GeForce RTX 3090
Memory	24 GB GDDR6X
Memory Speed	19500 MHz Effective
Boost Clock	1800 MHz
Digital Max Resolution	7680 x 4320
Bus Type	PCIe 4.0
Video Output Interface	DisplayPort, HDMI
Item Dimensions (LxWxH)	15.1 x 12 x 5 inches
Item Weight	4.65 pounds
Power Connectors	3x 8-pin PCIe
Cooling Technology	iCX3 Technology with Triple HDB Fans

Feature	Detail
<b>Additional Features</b>	Adjustable ARGB LED, All-Metal Backplate, Built for EVGA Precision X1

## WARRANTY AND SUPPORT

---

EVGA products are typically covered by a manufacturer's warranty. For specific warranty terms, registration, and support, please visit the official EVGA website. Keep your proof of purchase for warranty claims.

For technical assistance, driver downloads, and software updates, refer to the EVGA support portal. You can also find FAQs and community forums for common issues and solutions.