Sapphire 21207-00-50G

Sapphire Radeon HD 7990 Graphics Card User Manual

Model: 21207-00-50G

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Sapphire Radeon HD 7990 Graphics Card. Please read this manual thoroughly before installation and retain it for future reference. This graphics card is designed for high-performance computing and gaming, featuring a dual GPU architecture and 6GB GDDR5 memory.

SAFETY INFORMATION

Observe the following safety precautions to prevent damage to the graphics card or other components, and to ensure personal safety:

- Always disconnect power from your computer before installing or removing any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity before handling the graphics card.
- Handle the graphics card by its edges to avoid touching sensitive components.
- Ensure adequate ventilation within your computer case to prevent overheating.
- Do not expose the graphics card to moisture or extreme temperatures.

SETUP

System Requirements

- PCI Express-compliant motherboard with one or more x16 graphics slots.
- Minimum 750W power supply with two 8-pin PCI Express power connectors.
- Minimum 4GB system memory (8GB recommended).
- Supported operating system (e.g., Windows 7, Windows 8, Windows 10).
- CD-ROM drive or internet connection for driver installation.

Physical Installation

1. **Prepare your computer:** Power off your computer and disconnect the power cable. Open the computer case.

2. **Locate a PCI Express x16 slot:** Identify an available PCI Express x16 slot on your motherboard. This card is large; ensure sufficient physical clearance.

3. **Remove slot covers:** Remove the metal slot covers from the back of your computer case corresponding to the chosen PCIe slot.

4. **Install the graphics card:** Carefully align the graphics card with the PCIe slot and press it firmly until it is securely seated. Ensure the retention clip locks into place.

5. **Connect power cables:** Connect two 8-pin PCI Express power connectors from your power supply to the corresponding ports on the top edge of the graphics card. Ensure a secure connection.

Image: Top view of the Sapphire Radeon HD 7990 graphics card, showing the three cooling fans and the heatsink assembly. The card features a black and red design.

6. **Secure the card:** Use screws to secure the graphics card's bracket to the computer case.

7. **Close the case:** Replace the computer case cover and reconnect the power cable.

Driver Installation

1. **Power on:** Connect your monitor to one of the graphics card's display outputs (DVI-I or Mini DisplayPort) and power on your computer.

2. **Initial boot:** The operating system may install a generic display driver.

3. **Install AMD drivers:**

   - Insert the driver CD (if included) and follow the on-screen instructions.
   - Alternatively, download the latest drivers from the official AMD website (www.amd.com/support). Select your graphics card model and operating system.

4. **Restart:** Restart your computer after the driver installation is complete.

Connecting Displays

The Sapphire Radeon HD 7990 supports multiple display configurations. It features the following output ports:

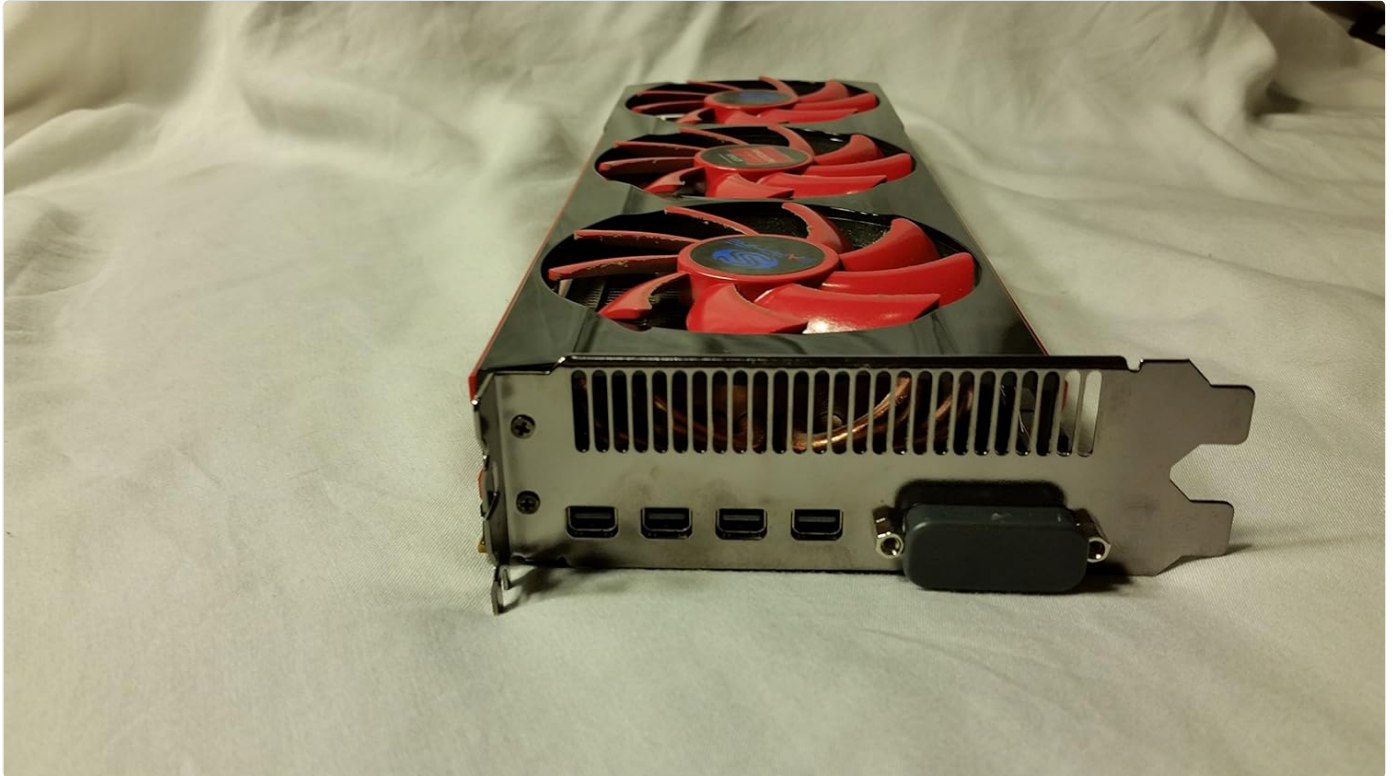- 1 x Dual-Link DVI-I port
- 4 x Mini DisplayPort (mDP) ports

Image: Side view of the Sapphire Radeon HD 7990 graphics card, showing the DVI-I port and four Mini DisplayPort outputs. A black DVI-to-VGA adapter is attached to the DVI-I port.

Connect your monitors using appropriate cables. For Mini DisplayPort, you may need adapters depending on your monitor's input type (e.g., mDP to DisplayPort, mDP to DVI, mDP to HDMI). Note that for certain multi-monitor configurations, *active* Mini DisplayPort adapters may be required.

Multi-Display Setup (AMD Eyefinity)

The card supports up to 5 simultaneous displays using AMD Eyefinity technology. To configure multiple displays:

1. Ensure all monitors are physically connected to the graphics card.

2. Open the AMD Radeon Software (formerly Catalyst Control Center).

3. Navigate to the "Display" or "Eyefinity" section.

4. Follow the on-screen prompts to detect and arrange your displays. You can choose between extended desktop, duplicate, or Eyefinity group modes for a single large desktop experience.

MAINTENANCE

Proper maintenance ensures the longevity and optimal 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 computer is powered off and unplugged before cleaning. Do not use liquid

cleaners.

- **Driver Updates:** Regularly check the official AMD website for the latest graphics drivers. Keeping drivers updated can improve performance, stability, and compatibility with new software and games.
- **Temperature Monitoring:** Use monitoring software to keep track of the card's operating temperatures, especially under load. Ensure your system has adequate airflow.

TROUBLESHOOTING

If you encounter issues with your Sapphire Radeon HD 7990 graphics card, refer to the following common troubleshooting steps:

- **No Display Output:**

  - Ensure the monitor is connected to the graphics card, not the motherboard's integrated graphics.
  - Verify that the graphics card is fully seated in the PCIe slot.
  - Confirm that both 8-pin PCIe power connectors are securely attached.
  - Test with a different display cable or monitor if possible.

- **Poor Performance or Crashes:**

  - Ensure you have the latest graphics drivers installed from AMD's official website.
  - Check for overheating. Monitor GPU temperatures during demanding tasks. Improve case airflow if temperatures are consistently high.
  - Verify your power supply meets the minimum wattage requirement and provides stable power.
  - Close unnecessary background applications.

- **Coil Whine:** Some high-performance graphics cards may exhibit a high-pitched "coil whine" sound under heavy load. This is generally not indicative of a fault and is often related to power delivery components. While not always preventable, ensuring a stable power supply and good case airflow can sometimes mitigate it.
- **Driver Issues:** If you experience graphical glitches or instability after a driver update, try rolling back to a previous stable driver version or performing a clean installation of the latest drivers.

For further assistance, consult the AMD support website or Sapphire's official support channels.

SPECIFICATIONS

Feature	Detail
Model Number	21207-00-50G
Graphics Processor	Dual AMD Radeon HD 7990 (GCN Architecture)
Stream Processors	4096 (2048 per GPU)
Core Clock	950 MHz (Boost: 1000 MHz)
Video Memory	6GB GDDR5 (3GB per GPU)
Memory Interface	768-bit (2 x 384-bit)
Effective Memory Clock	6000 MHz
Output Ports	1 x Dual-Link DVI-I, 4 x Mini DisplayPort

Max Display Support	5 Displays (via AMD Eyefinity)
Interface	PCI Express 3.0 x16
External Power	2 x 8-pin PCIe Power Connectors
Dimensions (LxWxH)	14.75 x 4 x 9.75 inches
Item Weight	4.55 pounds

Image: Backplate view of the Sapphire Radeon HD 7990 graphics card, showing the PCB and mounting points for the cooler.

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official Sapphire Technology website. Keep your proof of purchase for warranty claims.

For driver downloads and additional support resources, visit the official AMD support page:www.amd.com/support