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› SAPHIRE AMD Radeon HD 6870 1GB GDDR5 PCIE Graphics Card User Manual

Sapphire 100314-3L

SAPPHIRE AMD Radeon HD 6870 1GB GDDR5 PCIE Graphics Card

User Instruction Manual

1. INTRODUCTION

The SAPHIRE AMD Radeon HD 6870 graphics card is designed to deliver high-performance visual experiences for gaming and multimedia applications. Featuring AMD Eyefinity technology, it allows for expanded display setups, and with full Microsoft DirectX 11 support, it provides ultra-realistic visuals. This manual will guide you through the necessary steps to install, operate, and maintain your graphics card.



Figure 1.1: SAPHIRE AMD Radeon HD 6870 Graphics Card

2. SAFETY INFORMATION

Please read and follow these safety guidelines to prevent damage to the product or injury to yourself:

- Always disconnect power from your computer before installing or removing any components.
- Handle the graphics card by its edges to avoid touching sensitive components or static discharge.
- Ensure proper grounding to prevent electrostatic discharge (ESD) damage. Use an anti-static wrist strap if available.
- Do not expose the graphics card to moisture or extreme temperatures.
- A 500 Watt Power Supply Unit (PSU) is required for optimal operation of this graphics card. Ensure your system's PSU meets this requirement.
- This product is intended for users 18 years of age or older.

3. PACKAGE CONTENTS

Verify that all items are present in your product package:

- SAPPHIRE AMD Radeon HD 6870 Graphics Card
- Driver CD (*Note: It is recommended to download the latest drivers from the manufacturer's website*)
- Quick Installation Guide
- Accessory cables (if included, e.g., DVI to VGA adapter)

4.1 Pre-installation Checklist

- Ensure your computer case has sufficient space for the graphics card (Dimensions: 11.5 x 3.5 x 6.5 inches).
- Verify your Power Supply Unit (PSU) provides at least 500 Watts.
- Locate an available PCI Express x16 slot on your motherboard.
- Gather necessary tools: Phillips head screwdriver.

4.2 Physical Installation

1. Power off your computer and unplug all cables from the back.
2. Open your computer case. Refer to your computer's manual for specific instructions.
3. Locate an empty PCI Express x16 slot on your motherboard. Remove the corresponding expansion slot cover(s) from the back of your computer case.
4. Carefully align the graphics card with the PCI Express x16 slot. Apply even pressure to both ends of the card until it is fully seated in the slot. You should hear a click as the retention clip engages.



Figure 4.1: Graphics Card PCI Express Connector

5. Secure the graphics card to the computer case using the screw(s) removed earlier or provided with your case.
6. Connect the required PCI Express power connectors from your PSU to the graphics card. The HD 6870 typically requires two 6-pin PCIe power connectors. Ensure they are firmly seated.
7. Close your computer case and reconnect all cables.

4.3 Driver Installation

1. Boot your computer. Windows may automatically install a basic display driver.
2. For optimal performance and access to all features, download the latest AMD Radeon drivers for the HD 6870 from the official AMD website (www.amd.com/en/support).
3. Run the downloaded driver installer and follow the on-screen prompts. A system restart may be required after installation.

5. OPERATING THE GRAPHICS CARD

5.1 Connecting Displays

The SAPPHIRE AMD Radeon HD 6870 offers multiple display output options:

- **1 x Dual-Link DVI**
- **1 x Single-Link DVI-D**
- **1 x HDMI 1.4a**
- **1 x DisplayPort 1.2**

Connect your monitor(s) to the appropriate ports on the graphics card. For multi-monitor setups, utilize AMD Eyefinity technology through the AMD Radeon Software.



Figure 5.1: Graphics Card Display Output Ports

5.2 AMD Eyefinity Technology

AMD Eyefinity allows you to expand your desktop workspace across multiple displays, creating an immersive panoramic computing experience. To configure Eyefinity:

1. Ensure all desired monitors are connected to the graphics card.
2. Open the AMD Radeon Software (usually accessible via right-click on the desktop).
3. Navigate to the 'Display' section.
4. Follow the prompts to create an Eyefinity display group, arranging your monitors as desired.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your graphics card.

- **Dust Removal:** Periodically clean dust from the graphics card's fan and heatsink using compressed air. Ensure the computer is powered off and unplugged before cleaning. Hold the fan blades gently to

prevent over-spinning.

- **Driver Updates:** Keep your graphics drivers updated by regularly checking the official AMD website for the latest versions. Driver updates often include performance improvements, bug fixes, and new features.
- **Temperature Monitoring:** Use monitoring software (e.g., AMD Radeon Software or third-party tools) to keep an eye on the GPU temperature, especially during heavy loads. Ensure adequate airflow within your computer case.

7. TROUBLESHOOTING

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

- **No Display/Black Screen:**
 - Ensure the graphics card is fully seated in the PCI Express slot.
 - Verify that all necessary power connectors are securely attached to the graphics card.
 - Check that your monitor cable is properly connected to the graphics card and the monitor.
 - Try connecting to a different display output port on the card or a different monitor.
- **Display Artifacts/Distortion:**
 - Reinstall the graphics drivers. Consider using a driver cleaner utility (e.g., DDU) to completely remove old drivers before installing new ones.
 - Check the GPU temperature. Overheating can cause artifacts. Ensure proper cooling.
- **Poor Performance in Games/Applications:**
 - Ensure you have the latest graphics drivers installed.
 - Check in-game graphics settings and reduce them if necessary.
 - Verify that your system meets the minimum requirements for the application.
 - Monitor GPU usage and clock speeds to ensure the card is operating as expected.
- **System Instability/Crashes (BSOD):**
 - This can often be driver-related. Perform a clean installation of the latest stable drivers.
 - Ensure your PSU is sufficient and providing stable power to the card.
 - Check for system memory (RAM) issues.

If problems persist after following these steps, contact Sapphire customer support or consult a qualified technician.

8. SPECIFICATIONS

Feature	Specification
Brand	Sapphire
Model Number	100314-3L
Graphics Coprocessor	AMD Radeon
Graphics RAM Size	1 GB GDDR5
GPU Clock Speed	900 MHz
Video Output Interface	DisplayPort, DVI, HDMI
Product Dimensions	11.5 x 3.5 x 6.5 inches
Item Weight	0.01 ounces
Minimum PSU Requirement	500 Watts

9. WARRANTY AND SUPPORT

The SAPPHIRE AMD Radeon HD 6870 graphics card comes with a 2-year manufacturer's warranty. For warranty claims, technical support, or replacement inquiries, please contact Sapphire directly through their official website or support channels.

Manufacturer: Sapphire

Website: www.sapphiretech.com

Please have your product model number (100314-3L) and proof of purchase ready when contacting support.