



## Graphics Card Buying Guide Quick Reference Handout

Graphics cards are an essential component in any gaming or high-performance computing system. This article provides general information on graphics cards, GPU performance, and how to compare GPUs from various brands and types.

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### What is a graphics card?

A graphics card is a part of a computer responsible for rendering images, videos, and animations. It enhances a computer's overall performance, especially in gaming, video editing, or business applications.

### Difference between GPU, graphics card, and video card

GPU, graphics card, and video card are terms often used interchangeably. The **GPU**, or graphical processing unit, is a microprocessor designed to handle the complex tasks of processing graphics data. In some computers it will be incorporated right in the computer itself (called an iGPU) but more often, it's part of a separate circuit board. This circuit board with the GPU and other components is a **graphics card**. A **video card** is similar to a graphics card but has a GPU and other components specifically designed to handle video tasks efficiently.

### Types of graphics cards

Main players include NVIDIA, Intel, and AMD. NVIDIA stands out with impressive performance and cutting-edge technologies, with its powerful 4090 graphics card. Intel offers balanced performance solutions, while AMD is known for their performance and affordability.

### Three things to consider when choosing a graphics card

When selecting a graphics card, it's essential to consider performance, compatibility, and individual needs and preferences. **Performance** hinges on specifications like clock speed, memory type, and bandwidth, crucial for gaming or running complex applications. Checking for **compatibility** ensures your graphics card fits well with your existing system, like the motherboard and power supply. Lastly, it's essential to evaluate your **specific needs and preferences**. Each brand has its pros and cons, and the "best" solution varies depending on your requirements.

### How to check your graphics card

Windows users can utilize Device Manager or DirectX Diagnostic Tool, while macOS users can



check via the About This Mac option. For those using external solutions, specific software and manufacturer's websites can provide details. Understanding your graphics card's specifications helps you determine compatibility with games or software, plan potential upgrades, troubleshoot issues, and compare performance for optimization.