

# The Best Nvidia Graphics Cards

If you are a gamer, you probably have a pretty good idea of how important the graphics card is to your PC gaming experience. The better the graphics card on your PC, the better performance and graphics your games will have. Of course, graphics cards are not essential for gamers alone. As content creators, for handling graphics-intensive jobs like video editing and 3D design, you need a great graphics card that can keep up. However, upgrading your computer's graphics card can be a bank-breaking experience, especially if you don't know what you're looking for.

Determining the best graphics card is far from simple and will usually depend on what you need to do with your computer. Most laptops, business-level, and budget computers typically come with a low-level graphics card or none at all, prioritizing the RAM, CPU, and storage options. These machines utilize an inbuilt graphics accelerated silicon on the CPU called the Integrated Graphics Processor.

However, three types of users need to have a discrete Graphics Processor Unit on their computers. They are:

**Multiple Display Users:** A discrete GPU can be of benefit if you have multiple displays. For instance, if you have up to five displays directly connected to one system, a discrete GPU and IGP can help and may even be required. However, you don't even need to have a high-end graphics card for this kind of work if you're mainly displaying browser windows, simple applications, or just multiple static windows. All you need is a card with the right resolutions, specifications, and monitor interfaces.

**Workstation Users:** If you work with photo and video editing applications or even CAD software, a discrete GPU can greatly benefit you. This means you don't have to rely on the CPU alone to perform all the specialized operations and transcode video across formats. This will lead to better performance and quicker rendering times.

**Gamers:** GPU is especially essential for gamers, even more than RAM and CPU. The better the GPU, the better the gaming experience. You will access higher resolutions, frame rates, and graphical options with an upgraded dedicated graphics card.

# What To Consider When Buying A Graphics Card

**Cooling:** GPUs generate heat, and you can tell the heat output by checking the cards TGP value. You should ensure that you get one with a low TGP; if you're getting one with a high TGP, your computer will need more fans, and thus your case will need more space.

**Memory:** Modern graphics cards typically have video RAM ranging between two and twelve gigabytes. Memory ultimately determines the image quality as it allows higher resolutions, frame rates, and graphical settings.

**Bandwidth:** This is the amount of memory that the GPU can access at a time. The higher the bandwidth, the faster the rate at which data is sent to the shader's core, which means the better the clarity and performance.

That said, if you are looking to buy a graphics card, they are usually in two categories. There are consumer cards used for content creation and gaming, and there are professional cards for complex calculations, artificial intelligence, and scientific applications.

While several companies produce graphics cards, Nvidia is arguably the most dominant producer of both consumer and professional graphics cards. Today we're going to take a look at the best graphics cards they currently offer.

## The Best Nvidia Graphics Cards Of 2020

### **Nvidia GeForce RTX 3070**

The RTX 3070 is most similar to the GTX 970 that was released far back in 2014. It is similar in many ways, including the capability to hit high framerates with ease. The RTX 3070 provides impressive performance that could compete with what the RTX 2080 Ti had to offer. It is powered by the Ampere GA104 GPU, which has 46 streaming multiprocessors with 5888 CUDA cores. It also features the same architecture as the RTX 3090 and 3080.

This means power efficiency and raw performance are greatly improved, making this graphic card, which falls into the mid-range category, to perform at a level on-par with the best graphics cards from the previous generation. It also comes with 3rd generation tensor cores and 2nd generation RT cores, which ensures that the DLSS and ray tracing is far better and efficient than before.

The ray-tracing upgrade represents one of the best improvements of this card, offering twice the 1st generation RT core's performance output. It also has an incredibly low power consumption level when considering the upgrade in performance. The Total Graphics Power (TGP) rating is 220W, which means the cooling is far better than other Ampere cards. The size of this card is also smaller, and it comes at a lower price.

It has various features that make it an excellent purchase for gamers and remote workers alike. Nvidia Broadcast is one of those features, and though it is primarily designed for streaming games, it can be used for far more than that. For example, during video calls, the Nvidia Broadcast uses AI Tensor Cores to replace or blur out your background, doing so in a much better way than what video calling programs such as Zoom are currently capable of.

There is also RTX Voice software for keeping background noise out of the microphone and stabilizing other people's voice inputs. Additional features such as RTX IO and Nvidia Reflex are specifically designed for gamers. The RTX 3070 features 8GB of VRAM, a Core Clock of 1.50GHz with a boost to 1.75GHz, and a memory clock of 14Gbps.

### **Pros**

- It remains the best graphics card for its value.
- Exceptional performance level.
- Double the ray-tracing performance over last-generation cards.
- The TGP rates are low, which runs cooler than competitors.

### **Cons**

- It needs a dedicated 12 pin power connector.
- It may be unaffordable for more budget-conscious consumers.

[Check for it on Amazon.](#)

## **Nvidia GeForce RTX 3080**

This represents one of the most significant leaps of the modern era when it comes to graphics cards. It is a powerhouse card based on the Ampere architecture, and the performance profile of this card is far ahead of any Turing card. The Tensor and RT cores are in the third and second generation, respectively, and there have been significant improvements to the rasterization engine.

By cleverly optimizing the Streaming Multiprocessor to make the two data paths on each Multiprocessor capable of handling Floating Point 32, the number of CUDA cores on each Multiprocessor is twice what the Turing Graphic Cards had. This graphics card boasts between a 50 to 80% improvement in performance over RTX 2080 Ti. It features 8,704 stream processors, and the video memory capacity is an impressive 10GB. The core clock speed is rated at 1.44GHz with a boost to 1.71GHz and a memory clock of 19Gbps. This graphics card is unarguably one of the best available on the market today.

### **Pros**

- It offers incredible 4K gaming performance.
- It comes with a variety of useful features for non-gamers
- The price does not exceed that of the RTX 2080
- It features a low cooling intensity compared to competitors.

### **Cons**

- As a high-end card, it is on the high-end of the price spectrum as well.

[Check for it on Amazon.](#)

## **Nvidia GeForce RTX 3090**

If you are looking for performance, this graphics card remains unbeatable at the moment. With an insane 24GB of memory, this card is not made just for gamers — it was designed for those who work on heavy graphical applications such as 3D animations. Nvidia pitches this graphics card as one for creative professionals, but a gamer who can afford the exorbitant cost has nothing to lose and much to gain with impressive 8K gaming performance. No matter your use, it will deliver unrivaled performance on all fronts.

The card is built on the Ampere architecture and offers 10,496 CUDA cores spread across 82 streaming multiprocessors, as well as 82 RT cores and 328 Tensor Cores. As with the RTX 3080, both data paths on each Streaming Multiprocessor can handle FP32 workloads. Because this graphic card's power consumption can go as high as 357 Watts, Nvidia recommends a minimum of a 750 Watt power supply. The core clock operates at a rate of 1.40GHz and can boost to 1.70 GHz, while the memory clock operates at 19.5 Gbps.

### **Pros**

- Excellent cooling performance.
- Highest performing consumer GPU available.
- Incredible 4K gaming performance.
- Offers solid 8K gaming capability.
- Designed for creative professionals.

### **Cons**

- It is one of the most expensive cards on the market today.
- The card is relatively bulky, with a bit of heft as well.

[Check it out on Amazon.](#)

## **Nvidia GeForce RTX 2070 Super**

This graphics card is an upgrade to the RTX 207, offering improved performance at the same price point. The RTX 2070 Super features the Nvidia Turing architecture and comes with 2560 CUDA cores. The ray-tracing performance is better than what the original RTX 2070 offered, but the memory capacity remains the same at 8GB VRAM.

The increased CUDA cores and higher clock speeds make it more powerful than 2070, making for a much smoother and better gaming experience. The graphics card does offer 4K gaming support, but performs at a lower frame rate that may be unacceptable for most gamers. However, when it comes to 1440p gaming, this graphics card is an excellent performer. Its memory clock operates at 14Gbps with a clock speed of 1.605GHz that can boost to 1.77GHz.

### **Pros**

- The Founders Edition is much cheaper than the original RTX 2070.
- It features more CUDA cores than the original RTX 2070.
- Its 1440p gaming performs efficiently, even with ray tracing enabled.

#### **Cons**

- The Founder Edition card is quite heavy.
- It may be too pricey for many gamers.

[Check it out on Amazon.](#)

## **Nvidia GeForce RTX 2080 Ti**

For a while, this was the best GPU available on the market. While Nvidia has produced a few worthy successors by now, it continues to remain one of the most powerful cards you can buy. It is an absolute monster when it comes to gaming, offering Tensor Cores driven by AI and featuring ray tracing technology. For 4K gaming performance, this graphics card can easily deliver well over 60fps.

If you are looking to fully enjoy what this graphics card has to offer, pair it with a good gaming monitor and great processor as well. It was designed to replace the GTX 1080 Ti and costs as much in price. It features a substantial 11GB of VRAM, a boost clock of 1.635GHz, and 4325 CUDA cores. Two new cores that were not in its predecessor are the Tensor cores and RT cores. It features 68 RT cores that can render real-time lighting scenarios, natural shadows, and complex images.

The AI-based 544 Tensor cores ensure better anti-aliasing with the new Deep Learning Super Sampling technology that improves resolution. The bandwidth connector has also been changed to the NV link that promises a transfer bandwidth 50 times what previous cards could offer. The RTX 2080 Ti features two connectors that give as much as 100GB total bandwidth. It is developed on Turing architecture and has dual cooling fans that effectively exhaust heat.

#### **Pros**

- Revolutionary ray tracing gaming performance.
- Impressive frame rates at 4K resolution.

#### **Cons**

- There are more modern cards available at more modest price points.

[Check it out on Amazon.](#)

## **Nvidia GeForce RTX 1660 Super**

This is one of the best budget offerings available, and if you are looking for a budget option with reliable performance, this is an excellent choice for you. This card was first introduced in 2019 and is one of the best cards for 1080p gaming if you are working within a budget.

It is based on Turing architecture and does not feature RTX support. It has 1408 CUDA cores with 6GB of GDDR6 VRAM, offering bandwidth of 336Gbps, which is a clear improvement over the 192.1Gbps of the original RTX 1660 Super.

This graphics card also has features such as Nvidia ReShade, a post-processing and modding tool that allows users to create post-processing filters for your games that you can use in real-time. The cooling system for this graphic card includes an efficient combination of fans and thermal pads.

### **Pros**

- It is relatively quiet despite the cooling fans.
- It is one of the best budget options currently available.
- The Turing architecture is very power efficient.

### **Cons**

- It doesn't feature ray tracing technology.
- There are better alternatives at a similar price.

[Check it out on Amazon.](#)