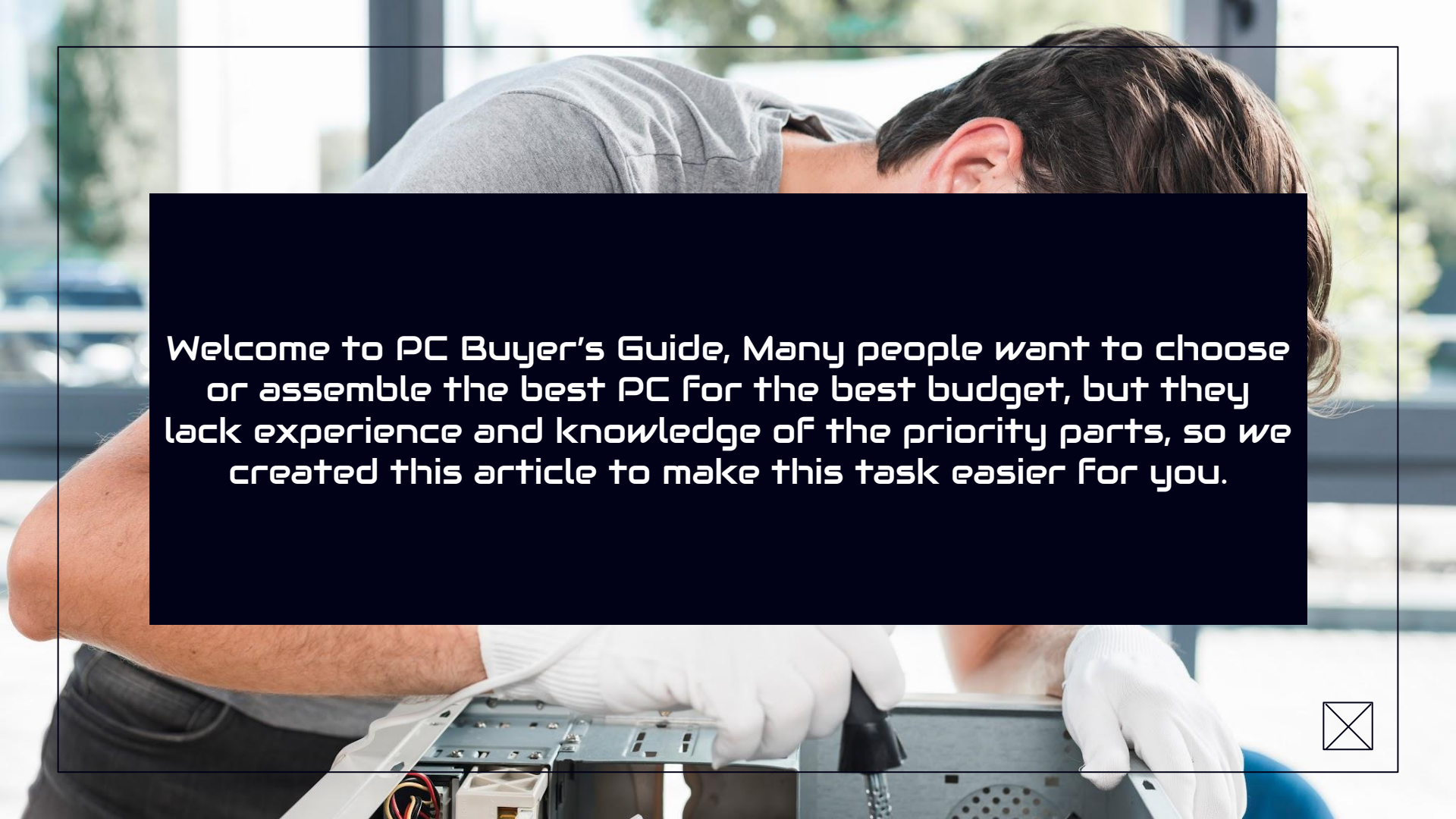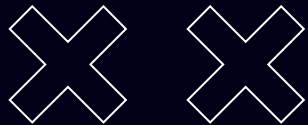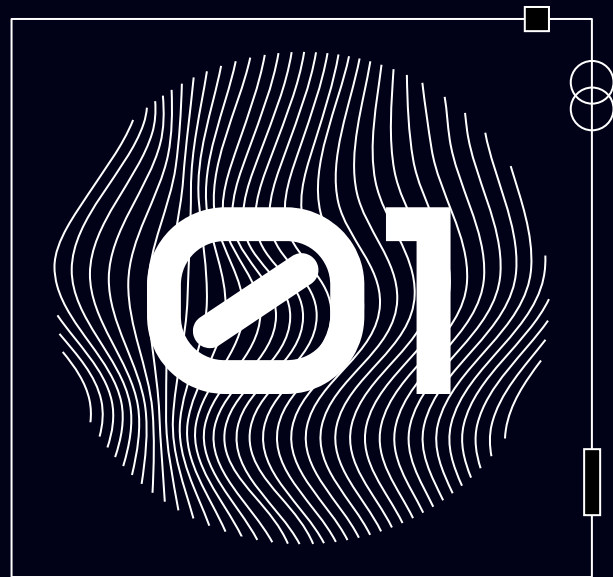# PC Buyer's Guide

Welcome to PC Buyer's Guide, Many people *want* to choose or assemble the best PC for the best budget, but they lack experience and knowledge of the priority parts, so *we* created this article to make this task easier for you.

Power Suplay

Fueling Your PC

01

Your PC's power supply is like the heart of your build, and to avoid any cardiac arrest, you'll need to calculate your power requirements.

1. Wattage:
Consider your system's power needs. For most setups, a 500-650W PSU is sufficient. If you have a high-end GPU or plan to overclock, go for 750W or more.

2. Efficiency:
Look for 80 PLUS certification for efficiency. Higher certification levels indicate less wasted power, which can lead to lower electricity bills. Bronze, Silver, Gold and Platinum-rated PSUs are excellent choices.

3. Modular vs. Non-Modular:
Modular PSUs allow you to connect only the cables you need, improving cable management. Non-modular PSUs are typically more affordable.

02
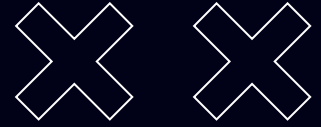
RAM

Your PC's Memory

DDR

DDR2

DDR3

DDR4

Random Access Memory (RAM) is the spice of life for your PC. It's *where* your system stores data for quick access, making multitasking a breeze.

1.Choose RAM memory that matches the desktop PC specifications. If, for example, your PC motherboard supports dual channel, then choose RAM that has double the amount.

2. Know the number of RAM slots available
- Choose memory with the same slot, because if it is not the same then the RAM memory cannot be used.

3. Know the previous RAM type and frequency
- Not all motherboards support frequency speeds in RAM memory. That way, you have to know the level of the motherboard's ability to accept the frequency speed of the RAM.

4. Know what PC or laptop OS you are using - Especially for those of you who want to add RAM from 4 GB to 8 GB, you have to pay attention to the operating system your PC or laptop is running.

5. Pay attention to the RAM Serial Number
- Pay attention to the serial number on the RAM. Generally, each RAM has aserial number, indicating whether the RAM is DDR1, DDR2, DDR3 or DDR4.

6. RAM capacity
- Make sure the RAM capacity you buy is the same as the series, so that performance can run stably.

7. Know the socket used
- if it's wrong it means you can't use it, and it's just a waste of money.

8. Use a Heat Spreader
- For those of you who usually use a PC or laptop for a long time, it is better for you to buy RAM that is equipped with a heat spreader.

9. RAM Brand and Warranty
- On the market, there are many manufacturers who make RAM. You should choose RAM from a popular brand so that there is no doubt about its quality.
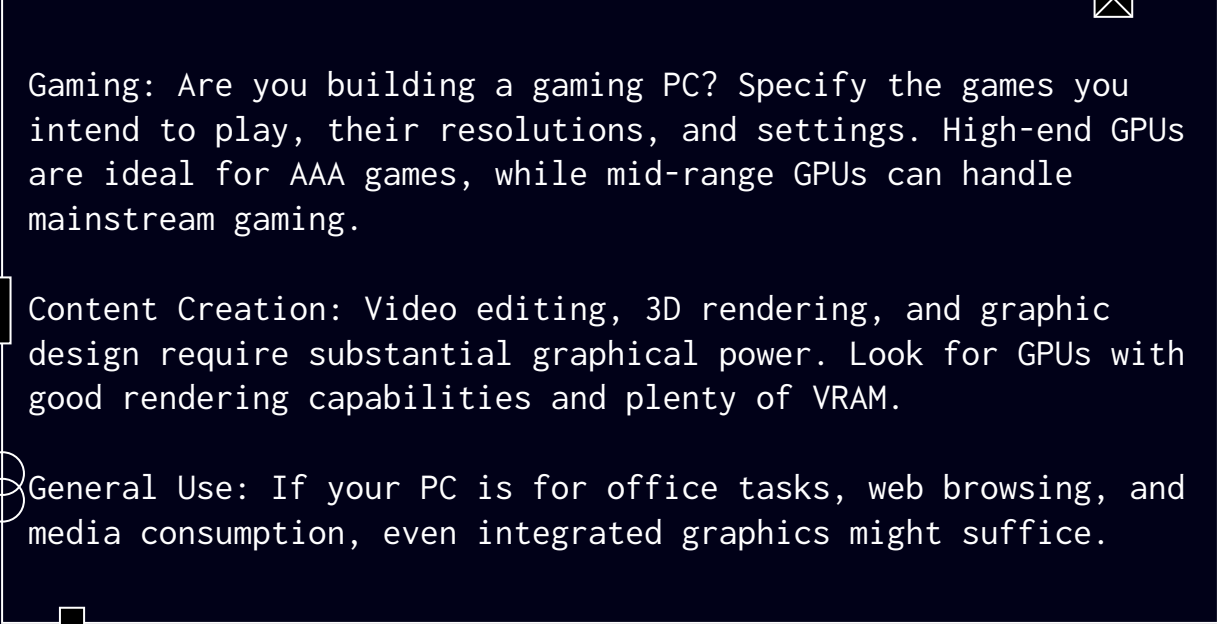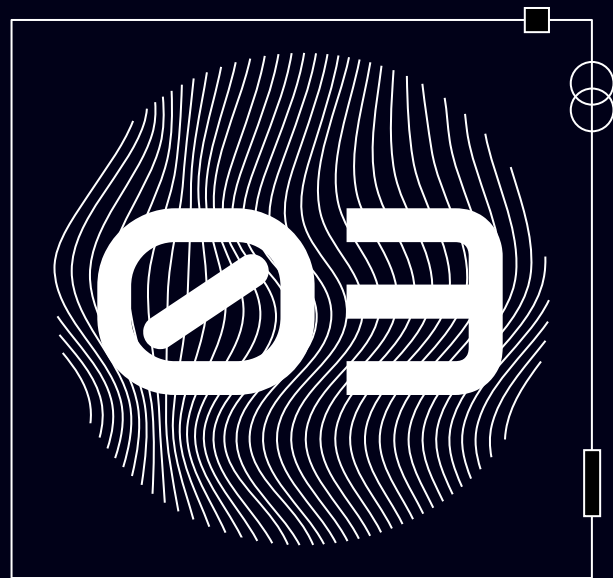
VGA

(Graphic card)

03
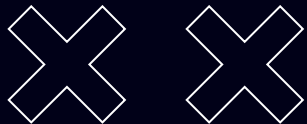
A graphics card, often referred to as a VGA (Video Graphics Array), is a pivotal component for any gaming or graphics-intensive PC. Making an informed decision when buying a graphics card is essential. Here's your comprehensive buyer's guide:

Gaming: Are you building a gaming PC? Specify the games you intend to play, their resolutions, and settings. High-end GPUs are ideal for AAA games, while mid-range GPUs can handle mainstream gaming.

Content Creation: Video editing, 3D rendering, and graphic design require substantial graphical power. Look for GPUs with good rendering capabilities and plenty of VRAM.

General Use: If your PC is for office tasks, web browsing, and media consumption, even integrated graphics might suffice.
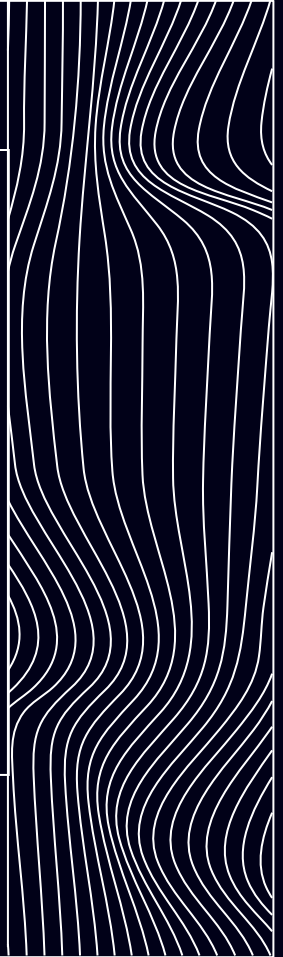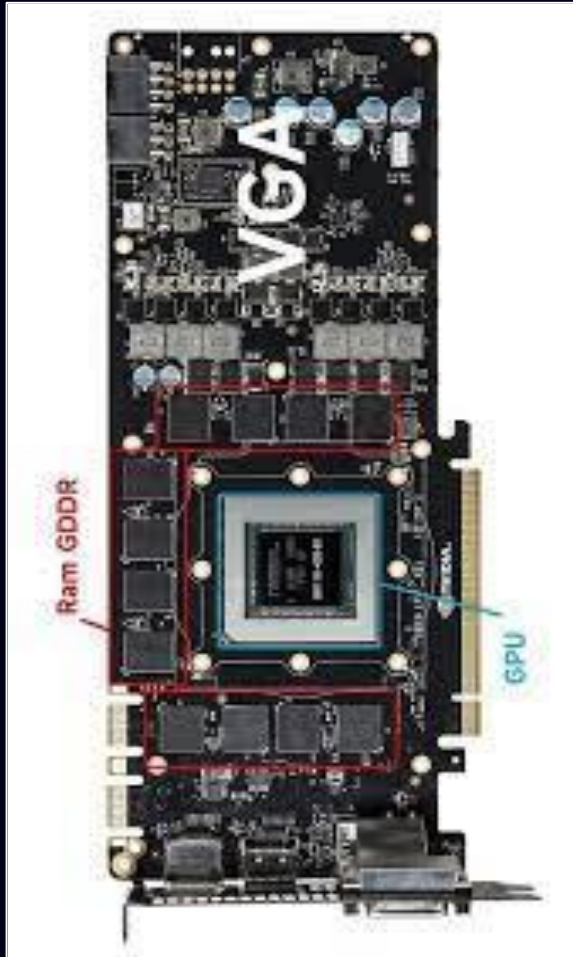
1. Define Purpose: Identify whether you need it for gaming, content creation, or general use.

2. Set a Budget: Determine how much you're willing to spend.

3. VRAM: Choose VRAM based on your intended use. More VRAM for higher resolutions and demanding tasks.

4. Performance Metrics: Consider clock speed, ray tracing, and DLSS support for gaming.

5. Compatibility: Ensure it fits your motherboard, power supply, and case.

6. Brand and Model: Look for reputable brands and models with good cooling solutions and warranties.
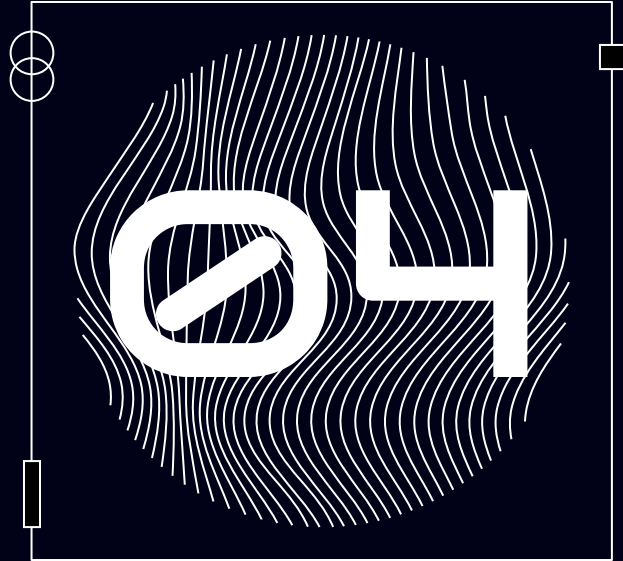
7. New or Used: Decide between new or used, but be cautious with used cards.

8. Monitor Compatibility: Check if it supports your monitor's resolution and refresh rate.

9. Future-Proofing: Consider a card that supports the latest technologies to prolong its lifespan.

10. Research: Read reviews and benchmarks for real-world performance comparisons.

Storage

SSD / HDD

When it comes to storage solutions for your PC, making the right choices can significantly impact your system's performance and data management. Here's a concise buyer's guide for storage:
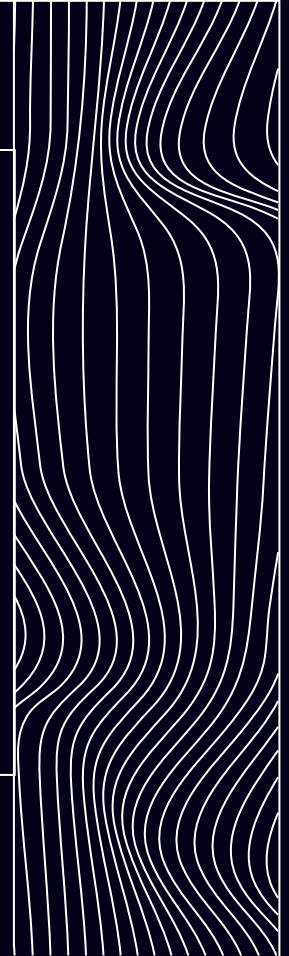
1.   Type of Storage:

SSD (Solid State Drive): Offers lightning-fast read and write speeds. Ideal for your operating system (OS) and frequently used applications.

HDD (Hard Disk Drive): Provides cost-effective, high-capacity storage for less frequently accessed data like games, media, and backups.

2. Capacity:

SSD: For your OS and software, 256GB is a minimum. For better performance and extra space, consider 500GB to 1TB or more.
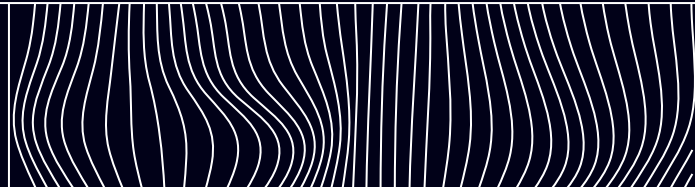
HDD: Choose a capacity based on your storage needs. 1TB or larger is typical for games, media, and file storage.

3. NVMe vs. SATA SSDs:

NVMe SSD: Offers faster speeds than SATA SSDs due to its direct PCIe connection. Ideal for demanding applications and users who need high-speed data transfer.

SATA SSD: More affordable and still significantly faster than HDDs. Suitable for general use and cost-effective storage solutions.

SSD vs HDD

SSD			HDD
faster	✓	✗	slower
shorter lifespan	✗	✓	longer lifespan
more expensive	✗	✓	cheaper
non-mechanical (flash)	✓	✗	mechanical (moving parts)
shock-resistant	✓	✗	fragile

best for storing operating systems, gaming apps, and frequently used files

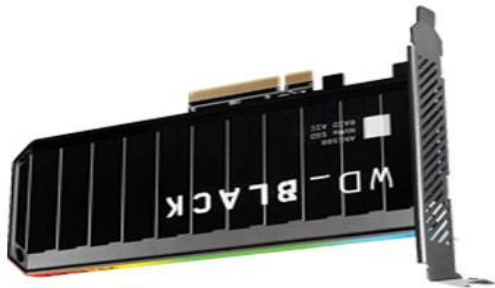best for storing extra data, such as movies, photos, and documents

SATA SSD

M.2 SSD

M.2 NVME SSD

AIC PCIE SSD

You can make considerations before buying an SSD or hard disk, here are several things you can consider:

1. Look for the capacity you want, of course according to your needs, both SSD and HDD, and according to the device you are using, both operating system and hardware.

2. It is recommended to choose a credible and quality brand. In my opinion, if you want to buy an SSD, the brands I recommend are XPG and Samsung, while for HDDs there are WD and Seagate brands.

3. The price of SSD is usually slightly more expensive than HDD.

4. My advice is that you can use an SSD to get faster performance (I recommend NVME SSD if you really need storage that has high speed.), and if you only need storage that is not too expensive HDD is the right choice because by choosing HDD you get relatively large storage at a lower price.

conclusion

In Conclusion, The buyer must choose the best parts and buy equipment that is consistent and appropriate for his device that made by popular brands that give a guarantee and, whether basic as mentioned or optional such as graphics cards, debug cards, GPIB cards, whether laptop or PC, and compatible with his work environment and use of the device so that it performs the best for every budget.

THANK YOU

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