# Laggy games, upgrade RAM or GPU

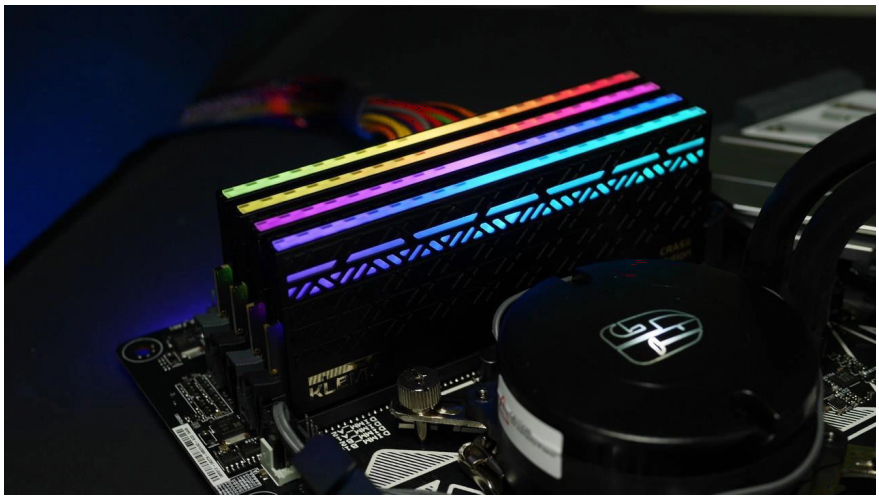
Most gamers who encounter FPS drops often think of upgrading their graphics card. Is that the right method?

Usually, we mainly look at the GPU and CPU processor without paying any attention to RAM, while it can affect the user's gaming.

In fact, the CPU is the PC component that takes the longest to become 'obsolete', as with a 2-core, 4-thread CPU, users can absolutely play 1080p games without any problems. However, the GPU and RAM are different as they can be the cause of the PC gaming experience being affected.

## Lack of RAM

When looking at a game publisher's minimum recommended specs, people often pay attention to the GPU and CPU, while the least important factor is RAM because many people don't consider it important. But that's a big mistake because modern games today recommend quite high minimum RAM requirements, sometimes even double that if you want to run smoothly.



Nowadays, whether for web browsing, office work or light gaming, PCs are recommended to have 8GB of RAM. RAM is used to store temporary information that it may need later when performing specific tasks. For example, with Google Chrome, opening multiple tabs can cause it to consume 80-90% of the memory on a system with 8GB of RAM.

Games also require data storage for later use, and in many cases 8GB is the recommended minimum. But that's just the minimum to get things running properly, with recommendations for 16GB of RAM all around. So anyone with less than 16GB of RAM could be facing a game that doesn't perform as expected, no matter how good their GPU is.

On current systems, there are usually at least 2 RAM slots. If the current RAM is only 8GB, users can check to see if the 2 RAM slots are fully exploited, if not, they can buy another equivalent RAM module. If you do not know the RAM specifications, users can use tools such as Speccy or AIDA64 to know the manufacturer, frequency and number of RAM modules on the PC.

## Outdated GPU

Many game developers are now starting to recommend 8GB of VRAM on GPUs to run content smoothly. This means that GPUs like the Nvidia GTX 1060 with 6GB of VRAM are no longer suitable, despite being a great GPU. The lack of VRAM makes moving scenes in games more difficult, forcing them to lower the quality to get good frame rates.


Remember, minimum requirements are always much lower than recommended, as they involve a reduction in display quality. For example, a game that requires 8GB of VRAM for 1080p can still run on a system with 6GB of VRAM but only at 720p for smooth gameplay.

Of course, upgrading a GPU can involve many issues that users need to grasp, such as the motherboard's support capabilities or whether the PSU is enough to power the system when the new GPU is installed, etc.