Hardware Recommendations for Autodesk Maya

Hardware Recommendations for Maya

Processor (CPU) • Video Card (GPU) • Memory (RAM) • Storage (Drives)

Like most software developers, Autodesk maintains a list of system requirements for Maya that can be used to help ensure the hardware in your system will work with their software. However, this "system requirements" list only covers the very basics of what hardware is needed to run the software, not what hardware will actually give the best performance. Because of how inconsistent those lists can be, we've taken the time to perform testing to determine what hardware run Maya the best. Based on this testing, we have come up with our own list of recommended hardware for Maya.

Processor (CPU)

How does Autodesk Maya utilize the CPU?

The majority of design tasks in Maya (including creating, modifying, and animating 3D models) are only able to utilize a single CPU core. That makes a high frequency CPU, regardless of the core count, an ideal choice for these tasks. Our Maya Design & Animation workstation focuses on this type of workload.

However, many types of rendering engines – like Arnold, which is included with newer versions of Maya, as well as Mental Ray, V-Ray, Keyshot, and others) – are highly efficient at utilizing a high number of cores. In fact, most of these engines scale almost perfectly… which makes a CPU with twice the number of cores almost twice as fast. We offer other configurations with that type of CPU, for those who focus more on that type of workload.

What are the best CPUs for Autodesk Maya?

The choice of best processor for Maya depends on what you do most within this program, but here are two of the top options:

- **Intel Core i7 13700K 16 Core –** This is one of the highest clock speed CPUs available, and tops the charts for single-core performance in Maya. If you do a significant amount of rendering, though, its smaller core count will be a limiting factor. The i9 13900K has a few extra "efficient" cores, and slightly higher clock speed, if you want a further boost – but for a substantial increase when rendering, look to our next recommendation.
- **AMD Threadripper PRO 5995WX 64 Core –** AMD's Threadripper PRO line packs a huge core count along with good per-core performance, making it a fantastic choice for workstations that are focused on rendering performance. The good single-threaded speed means these chips also do well with modeling and animation, though they cost a lot more than a processor with comparable performance in those areas but fewer cores. These chips also support a lot of PCI-Express lanes, making them great for multiple video cards if you prefer GPU-based rendering.

Video Card (GPU)

How does Autodesk Maya utilize video cards (GPUs)?

When creating, editing, and animating models in Maya, the video card is a large part of how many frames per second (FPS) the viewport is able to display the model at. A higher FPS will result in a smoother and overall better experience when rotating, zooming, or panning around the model you are working on. In general, 30 FPS is considered a minimum acceptable framerate, while 60 FPS is ideal.

What type of video card should I use for Autodesk Maya?

With recent versions of Maya, Autodesk has included both NVIDIA professional and GeForce cards in their lists of supported GPUs. However, they differentiate between the two in that they call the pro-grade (formerly Quadro) cards "Certified" while the GeForce are only "Tested". Because of this, our higher-end recommended system defaults to a NVIDIA professional RTX model For the times when using a GeForce card takes priority over official Autodesk support, like game development or GPU-based rendering, we do list GeForce options as well.

Memory (RAM)

How much memory does Autodesk Maya need?

While the exact amount of RAM you need is going to depend on your particular projects, for Maya we generally recommend a minimum of 16GB. Very complex scenes may need up to 32GB of RAM, although it is rare for Maya to require more than 32GB.

However, if you will be doing a large amount of complex, high resolution rendering, you may need 64GB or even more RAM.

Storage (Drives)

What is the best type of drive to use for Autodesk Maya?

Thanks to their speed and relatively affordable price, we strongly recommend solid-state drives (SSDs) for the primary drive that will host your OS and the installation of Maya itself. The high speed of SSDs allows your system to boot, launch applications, and load files many times faster than any traditional hard drive. In particular, the newer NVMe type of SSDs utilize the latest connections like M.2 and offer the fastest transfer rates.

If your budget allows, it is also a very good idea to have a second SSD that can be used to store your active projects to further decrease load and save times. We highly recommend using an OS drive with a capacity of least 500GB to ensure you do not need to upgrade your primary drive (which is often a complicated process) in the near future.

What sort of drive is best for data storage and backup?

Since SSDs are still more expensive than platter drives per GB, for long term storage and backup we recommend using a traditional hard drive or even an external drive array. Network attached storage systems are a great way to go for that, as they can be shared between multiple workstations and usually offer features to provide some level of data redundancy (protection against losing files if one of the drives dies).