

SPECIFYING HARDWARE FOR BUILDING A NEW COMPUTER

Building a new computer is one of the most rewarding tasks you can accomplish, but for a first-time builder, the sheer volume of options for hardware can be a bit intimidating. Keep reading for a few tips to show you what to look for.

Consider what tasks you want to accomplish with your new computer. Here are a few questions to ask before specifying your build:

- How are you going to browse the Internet?
- Are you going to use office productivity software (e.g., Microsoft Office)?
- Are you going to use video or image editing software?
- Are you going to play video games?
- Are you going to be multi-tasking (multiple applications open at the same time)?
- What is your desired monitor size and resolution, and how many monitors will you have?

Most low-end computer hardware available today is more than adequate for handling Internet browsing and office productivity. Consider a high-end graphics card and processor for graphically intensive activities such as playing games and video editing.

When shopping for a processor, observe the processor speed. For graphically intensive activities, your processor speed should be at least 3.0 GHz. You can find this specification on the manufacturer's website and most retail sites, such as Newegg.

To supplement your processor, you will need to choose a graphics card. This is arguably the most important component in your computer, and the one you will upgrade most frequently. You will need a high-end card to run graphically intensive activities, high-resolution monitors, and multiple monitors. These tend to cost anywhere from \$300 to \$2,000. To help set a reasonable budget, compare performance between cards, and avoid over-paying, do a little research. A great resource for comparing both performance and price is www.videocardbenchmark.net.

For multi-tasking, you need more RAM. As a general guideline, 6 to 16 GB will accomplish most multi-tasking with no issue. If you are going to have more than 4GB of RAM, however, you will need a 64-bit operating system. Also consider how much RAM your motherboard can handle and in what configuration.

Storage is another consideration for your build. Solid-state drives (SSD) offer many benefits over hard disk drives (HDD) including performance and longevity, but they are more costly and the storage space is much smaller. A popular configuration is using an SSD to store the operating system and most commonly used applications, while a larger HDD stores games, photos, videos, and music. For removable storage, a Blu-ray drive or DVD drive is still handy to have, and most new motherboards come with the latest USB technology, if you are going to use external storage.

Visit www.pcpartpicker.com and click **Start a System Build** to make certain all of your components are compatible.

Here are some quick tips:

- Match the socket type on your CPU to the socket type on your motherboard.
- Be sure to buy a large enough power supply! It should be at least 50 W larger than you need.
- Buy a case that matches your motherboard form factor (i.e., ATX, micro-ATX, etc.). This specification can be found on most retail sites and the manufacturer's website.