

**Computer Purchase Guidance: Weighing The Balance of Price and
Performance in Eight Minutes**

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Purchasing a personal computer or upgrading one can be a challenging task. Newspapers, magazines, T.V. and even Internet “pop-ups” endlessly advertise computers and upgrades of varying configurations. The choices are staggering and if you’re not “watching the market” how do you make an informed purchase decision?

The Wrong Choice Made Easy

Computer store owners choose from hundreds of components and present various computer configurations from meek to muscular but sometimes these can be the wrong choices, particularly for the average user. Generally speaking, under-spending can sometimes cost significantly in computer upgrades just months later and over-spending on the latest hot rod is just a waste of money, especially for an assortment of features that may never be used. So, how do you choose?

Determining What’s Best For You

To choose the right components for your next PC (personal computer) you need to talk to a technician, not a salesperson, who can illustrate in lay terms the features of your pre-assembled machine. If you go into the conversation with a little background on the subject, it’ll make for a smoother purchase decision. Understanding computers and more precisely, a computer’s features is easy if explained with care.

Understanding Your Computer’s Features in 8 Minutes

There are four parts inside a computer box or “tower” that matter. These are:

1. The main board or “mother board”
2. The memory or “RAM”
3. The hard disk drive
4. The processor or “CPU”

The main board is the computer’s control center. Everything plugs into this part to make the whole. Know the brand and model you’ll be buying and discuss its feature set with your technician so that you’re not paying for something you don’t need. Things like the computer’s sound and internet connection are commonly “built-in” to the main board.

The memory or “RAM” is a way for a computer to store information temporarily for fast recall. The more you have, the more responsive your computer. Two 1GB (gigabyte) modules are considered a “B+” on the grade scale and a good starting point for new computers. If you’re economizing, don’t buy less than 1GB. Any technician can add a second module in less than 2 minutes.

Hard drives are storage boxes, electronic repositories of information. They hold things like movies, music, photos and other documents you create on your computer. The more space you have, the more stuff you can store. Check the prices of various sizes and ask your technician to point out the best value. Often, the price difference between a 250 and 320 “gigabyte” hard drive is a mere \$20. A 250 “gigabyte” hard drive is a good starting point. If you need more space, your technician can add a second hard drive in minutes any time thereafter.

When you use your computer, you’re processing data or working with it. It’s nice to have data processed quickly without having to wait. And that’s where the fourth part, the “processor” comes into play. In years past, we had to wait and wait and wait for a computer to finish “thinking.” The good news now is that almost any computer with a processor speed of 3000 “megahertz” or greater will have plenty of power to complete any task thrown at it, including the drawing of a Boeing® 777 passenger aircraft should you elect to design one. Seriously though, ask your technician to guide you into the fastest processor, but one that balances price with performance. Processor prices plummet, sometimes overnight, so look at a processor price chart to determine which one is priced most favorably at purchase time and choose that one.

Your main board, memory, hard disk drive and processor should each have at minimum a 3 year warranty. Some hard drive brands carry a full 5 year manufacturer’s warranty. There is no reason to pay for a 2nd and 3rd or even 5th year warranty when the manufacturer provides it at no charge to the vendor. This is true for all but the best component manufacturers so you should never pay for additional warranty coverage on any locally assembled personal computer built in North America.

After these 4 “core” components are selected you’re left to choose “4” more essential parts to complete your computer. Here they are:

1. A DVD Read and Write drive or “DVDRW” is a device for your computer that records your own CDROM discs, DVDROM discs or both. Why would you want to record your own CDs or DVDs? To safeguard the data you create; a book you wrote, digital family photos, your resume or your genealogical history. There are several ways a computer can lose data, but with your files on a CD or DVD, you can be sure that your files will be kept safe. A DVDRW drive is priced about \$15 more than a CDRW (a drive that records CDs only) so opting for a DVDRW really is the best choice. Record your data regularly. Typical warranty: 1 year.

2. A video card. A video card displays a picture on your computer screen. These cards vary greatly in features and price but any card will suffice for entry level display purposes. If you want to play the latest game titles, ask your technician for a brand and model and then find a review in a gaming magazine. Do your research. In particular, check your favorite game for its video requirements: it will be written right on the box. As a general rule, a video card with 256 “megabytes” of memory supporting “Microsoft® DirectX 10” or higher will play games just fine. Warranties are from 2 – 5 years on most video products.

3. A monitor. The industry and most computer users prefer thin, flat screen monitors. They save space, have little or no radiation and are easy on the eyes. Known as “LCD Monitors,” you’ve seen them everywhere, including the long lines at your local bank. LCDs have replaced CRTs, the larger box type monitors. Compared to a standard computer monitor or “CRT Monitor” LCDs are priced marginally higher but prices are coming down fast and the screens are getting larger. An average size now is 19” but 22” widescreens are getting popular. Multiple monitor computing is also gaining popularity as screens become cheaper. “Virtual desktops” that span 2 screens is a very efficient way to utilize a personal computer and the space on your desktop. Ask your technician about multiple monitor computing. Warranties on LCD monitors are a minimum 3 years.

4. A case and power supply. Unless you're apt to tinker or care for the aesthetics, any off-the-shelf, "beige box" computer case will house your computer as every case conforms to a known set of rules for assembly and cooling. If you won't be working inside it, ask your technician for his or her recommendation; chances are, he or she will have a favorite case and since they'll be working on it in the future, it's a good idea to trust their judgment as to what works best. There are a lot of cases to choose from, from clear acrylic to piano-black aluminum and everything in between but it really becomes a personal choice. Whichever case you choose, make sure the power supply inside it is approved by the manufacturer of your processor (see item #4 in Understanding Your Computer). In most situations, that processor will be made by either AMD® or Intel® (the latter provide the bulk of processors worldwide).

After considering the assemblage of a personal computer, you might wonder: why not just buy a brand name computer from a reputable vendor and forgo the myriad choices? There are several, excellent reasons to choose your own components. Here, we compare:

Locally Built Computers V.S. Brand Name Computers

In this comparison we look at the least expensive personal computer from one of the most influential PC manufacturers in North America and a "pre-assembled" personal computer chosen from brand name parts. From our "locally assembled personal computer" we found that:

1. We won better overall response times from our hand-picked component parts.
2. We typically received double the storage capacity at the same price.
3. We obtained a larger case with greater air flow for heat dissipation and space for unencumbered upgrades.
4. We were afforded a higher end power supply.
5. Our main board offered more features and better upgrade potential.
6. We were gifted a 3 year warranty on the most expensive parts, "Brand Names" charge for the same.
7. We received technical support "just down the road" in a "one on one" environment instead of just over the telephone.
8. We found that our Brand Name PC was at least 3 months or more behind the latest trends.

Finding the right balance of price and performance is often elusive, but with the right purchase guidance and with a little background, you're definitely a measure closer to getting the most value out of your computer purchase.

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About the Author: Frank G., Comptia A+, MCP, is the owner of The Upgrade Path Inc. (<http://www.theupgradepath.com>). Over a 17 year period, he has assembled thousands of personal computers in the Greater Victoria area. Comments on this article can be sent to his email address info@theupgradepath.com