

All I want for Christmas is a new computer!

With the Christmas holiday coming up soon, many people are contemplating computer purchases... but are not sure what to get. Computer shopping can be confusing with many options and price levels to consider. With this issue, I will describe a few specifications to search for when considering a purchase.

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Part 1: Desktops and Laptops

Despite the success of laptop and tablet computer sales, the traditional desktop computer is still the best choice for many businesses and those who need ultimate performance. Laptops are great for mobile workers, and we'll talk about Tablet computers in Part 2. Here's what to look for:

Operating System (OS): If you are buying an Apple Desktop or Laptop computer, your choice of operating System is basically OS-X, a great OS. No Worries. If you are buying a Windows 7-based PC or Laptop, then you need to search for which version is loaded on the machine. You don't want to get the 32-bit version, you want the 64-bit version.

Why: 64-bit computing is so "now", 32-bit is so "last decade". But seriously, 64 bit computing opens up a lot of possibilities to do more work, and do it faster. With 64-bit computing comes the option of running multiple operating systems simultaneously, being able to work with larger files, and moving / sorting / saving data faster.

How to tell: Whether the machine comes with "Windows 7 Home", "Windows 7 Professional" or "Windows 7 Ultimate", you want the 64-bit version. It will be listed in the specifications, or have the onsite salesperson show the computer status screen, it will show whether the machine is 32-bit or 64-bit.

Processor (CPU): In days gone by, everyone slavishly followed CPU speeds, rated in Gigahertz (or Megahertz) but these days, raw speed means little or nothing for most typical computer tasks.

Why? Most computer processors are so fast, you cannot tell between the best and worst if all you do is type a memo, read email, surf the web, or create a simple spreadsheet.

How to tell: Nevertheless, read the computer specifications and look for dual-core processors named "Intel Core2", "Intel i7" "Intel i3", "AMD Athlon" or "AMD Phenom". Don't get too concerned about speed ratings.

Memory (RAM): The amount of RAM available is critical. More is always better. Always. Really. I mean it. Consider 4GB of RAM the lowest you can go. Many low-price computers come with "2GB" or "3GB" RAM, don't fall for that trick.

Why? Windows7 and Mac OS-X are fully 64-bit operating systems - each can use more than the original 3GB RAM limit. That means anywhere from 16GB on up to 192GB of RAM can be used, if the computer can hold that much. It also means double the amount data can be moved, sorted, stored and calculated in the same number of processor clock cycles. Finally, the newer processors have the capability to run more than one operating system simultaneously, such as WindowsXP and OS-X on a MAC, or Windows7 and Linux on a PC.

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How to Tell: Again, read the specifications, and look for terms like “Memory” or “RAM”, or “4GB”. If your budget can stand it, look for computers that state RAM as 6GB or 8GB, the performance will be better. Going right up to 16GB or 32GB is not out of the question if you plan to use more than one operating system simultaneously.

Graphics Processor with Dedicated Video Memory (GPU, VRAM): Most computers have the Video Graphics Processor built-into the motherboard, the way to tell is to look for “shared RAM” in the specifications. As such that is OK, but if you want ultimate graphics performance, get a machine with dedicated Video RAM, and/or a discrete GPU card/VRAM. I consider having discrete GPU with its own dedicated memory to be more important than raw processor speed in actual and perceived performance.

Why? With the graphics-rich content of most websites, the advent of easy to use video editing on computers, and documents containing photos or video content, video graphic performance is more important than raw processor speed by a wide margin. A simple PowerPoint slideshow uses far more resources than a typical spreadsheet, a YouTube video uses more power than the largest email you ever received, and so on.

How to tell: Look for the “Graphics”, “GPU”, or “Video” specifications of the computer. You want to see something like “ATI Radeon” or “nVidia GeForce” listed as the graphics card. Both are top-tier video graphics manufacturers. Along with those manufacturer specs, you also want to see something like “512MB VRAM” or “1GB VRAM” listed as the amount of dedicated video memory. Again, more VRAM is better, as much as your budget can sustain.

Part 2: Tablet PC's

Tablet PC's such as the i-Pad are rapidly overtaking the traditional desktop and laptop markets. It's easy to see why - they are very light and portable, and suitable to most simple web browsing, email, e-Reader, or entertainment tasks. There's also a lot of tumult in this category, as tablet computing is not yet well-defined.

Why? No single device, OS, or manufacturer has captured dominant status yet. The i-Pad got out to an early lead, but now Android-based devices have overtaken the i-Pad. Android-based devices can range from slate computers (looks like an i-Pad) to Netbooks, to E-Readers, to Smartphones with keyboards. If you ask me, Apple should stick a phone in the i-Pad and be done with it. They would have the ultimate “killer device”, but Steve Jobs is not returning my calls.

How to tell: Well, there's not much to tell at this point. This market segment is so volatile, the only guidance I can give are the basics of buying any computer...

1. Research what “apps” you want to run.
 - a. Ultimately it's the software you need to use that should decide what device you purchase
 - b. The number of new “apps” grows daily, so you'll need to review your choices if you wait too long
 - i. “Too Long” is defined as more than a couple weeks. I am not kidding.
2. Research the device itself, with a “hands-on” trial.
 - a. Screen Size: too big, or too small for you to use?
 - b. Can you master the finger or stylus movements needed to navigate and select menus?
3. You could just wait it out...
 - a. Many “smartphones” have, or soon will have, the same capabilities as tablet PC's
 - b. Early adopters sometimes become also-rans... wait for the shakeout and then buy...

Summary: As always, I welcome questions, debate points and comments. Call me, send email, or whatever you like. Meanwhile, have a safe and enjoyable Holiday Season!