

So I guess you want my standard “Which computer should I buy?” speech. 😊

I do not recommend any specific brands. All the big builders have bad (cheap), good, and fancy (expensive) models. Consider the following factors/questions when making your decision:

Laptop or Desktop? The intermediate between are “All-in-ones” – think of these as big screens (21” to 27”) with a laptop grafted on the back of the screen. They may or may not have a touch screen.

Apple Mac or Microsoft Windows? Apples start at \$1,000, acceptable Windows machines at ~\$300. With a price tag of \$1k or more, any computer will be good.

What is your level of **computer experience**? If none, look to a **tablet** instead of a “computer.” The least expensive acceptable tablet is the 7” Amazon Fire at \$50+, the \$100 8” Fire is better, and the best tablet for the price is the standard 10” Apple iPad at ~\$300. Tablet sizes run from a small 6” to a large 12.” If you already know Windows, buy Windows, and the same for Apple Macs and iPads. A **Chromebook** is an excellent choice for those that want to simplify, it is effectively a big phone with a keyboard; ask for more about Chromebooks if interested. The Senior Surfers have a Chromebook to try-before-you-buy.

Screen size is an important attribute of laptops: 12”-13” is best for those computers that will be carried around a lot, 15.5” is the most common size (the largest that comfortably fit on an actual lap) and 17” is the largest available size that usually just sits on a desk. All-in-Ones have larger screens, do not have a box to sit on the floor, and are not built to be carried around. Common desktop monitors are 21” to 27” and having multiple monitors is an option. (I have three 24” monitors on my desk.)

There are two major **CPU** manufacturers for computers: Intel and AMD. AMD, relegated to the slums for many years, has moved on up to the East side with their “Ryzen” line of CPUs. One can equate a Ryzen 3 with Intel’s Core i3, their Ryzen 5 with the i5, and 7 with the i7. Often a Ryzen CPU is faster but less expensive than the comparable Intel CPU.*

CPUs: There are many processors; to simplify, consider only the AMD Ryzen and the Intel Core ‘i’ series:

Buy a computer with an Intel Core i3 / Ryzen 3 CPU to save the most money, these are budget computers.

Buy a computer with an Intel Core i5 / Ryzen 5 CPU for mainstream, standard performance.

Buy a computer with an Intel Core i7 / Ryzen 7 CPU for the best performance & longest useful life.

There are lower CPUs than i3’s, avoid them; “Pentiums” and “Celerons” are examples. There are higher CPUs than i7’s, avoid them; the Intel i9 CPU alone can be \$1,000+. Each higher class will last longer and be useable for a longer time. As of 2023 there have been 13 generations of the Core ‘i’ series and 7 generations of the AMD Ryzen CPUs. Anything after the Intel 10th or AMD 4th would be good. Older ones are not bad, but they would have to be cheap to be attractive.

RAM: (Usually) Do not worry about it. Even new budget computers will have 8 GB. 32 GB is overkill in most cases, used in high-end “Gaming” computers. Expect 8+ GB, avoid cheapies with only 4 GB.

Speaking of Gamers, there are the people that play the hi-end computer games like Call of Duty, Warcraft, Halo, etc.; Fortnite and Minecraft are not considered hi-end games. If this is you, you do not need this guide, pick a video card without me. (I have an old GTX 1080 which does fine for me.) Hi-end video cards can be stupid expensive and hard to find. (the Nvidia 4090 is \$2,000+ for card alone.)

File Storage, HDD vs. SSD. (Hard disk drive vs. Solid-state drive) This is a size vs. speed decision. A 1 TB SSD will be more costly than 1 TB HDD, but this difference is dropping. An SSD usually is ~\$100 more

than an HDD in system cost at half the size. If a desktop, you can have both; there is lots of room in a desktop case. **My recommendation:** get something with an SSD; if possible, a M.2 PCIe NVMe SSD which is the fastest interface available. 256GB is ok if one does not have a lot of personal files to store, 512GB works for most any but the pack rat. (I am one of those, so do not judge.) Once experiencing the speed of a SSD you will never go back.

Windows 11: This is the current Microsoft OS and has additional requirements over previous versions. A new Windows computer you buy should have Windows 11, Windows 10 support and updates go away on Oct 14, 2025. There are ways that you can make 11 look like earlier versions if that bothers you.

Touch Screen: What do you use your computer for? For things like simple games, reading news and web surfing, a touch screen can be very helpful. For office applications, email and complex games, a touch screen is useless. On desktop computers it is more common to have multiple monitors than touch screens. I like a touch screen on my laptops as they are used for many things.

Tablets *always* have touch screens. 2-in-1 laptops have keyboards which can either be detached or folded back against the touch screen; this effectively makes them into large tablets. I like this feature on my laptop for casual computing – sitting playing simple games or looking up things while watching TV. I also like the touch screen on all-in-one computers while standing up – it is easier to tap the screen than to reach down to the mouse and/or keyboard. Large touch-screens are expensive.

Optical Drive: (CD/DVD/Blu-ray) Like floppy disks, these are now considered obsolete. If you really want one, a USB external DVD-writer is available for less than \$20.

Costs: New computers less than \$300 are probably junk. One can find Core i3's around \$400, i5's around \$600, and i7's around \$800 at the lower end of the scale. All Apple laptops and All-in-one desktops are \$1,000+ and can easily run over \$2,000. The very nice Microsoft 'Surface' and Dell XPS laptops are also in the \$1,000+ range. A \$1,000 desktop would be good for everything except hi-end gaming. The video cards used in hi-end gaming can run \$700 to \$1,500 for the card alone!

My main desktop computer (now 4 years old, assembled from new & used parts) was \$880, I use it 4+ hours every day. Suggest spending more if you use it often. Don't fight with mice or keyboards that don't fit you, both are inexpensive.

My just replaced laptop was approaching 6 years old and was still doing fine, an example of spending a bit more giving it a longer life. Its replacement (a Black Friday deal, \$600) is a HP 15t-dy200 with a Core i7-11th gen CPU & 16 GB RAM; its other specs equal the old Toshiba.

The new NSC computer lab computers are "Mini PCs." \$600 bought an Intel Core i7- 13th gen CPU, 16 GB RAM and a 512 GB NVMe SSD; a lot of power in a small 6"x6" box. These were what I consider a great deal, most Minis in this class are \$1,000 or more.

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*Comparing CPUs gets confusing. Between the 2 manufacturers, the 4 levels and multiple generations, it is impossible to know which CPU is faster and more capable. To do direct comparisons of specific CPUs, use this website: <https://www.cpubenchmark.net> and compare the Passmark benchmarks.

<https://www.reviewgeek.com/79990/what-to-look-for-in-a-desktop-computer/>

Appendix

Switching from an 'old' computer to a 'new' one or reloading the OS without losing information.

This applies to Windows machines only, MacOS, iOS and Android have different processes. Recommend deleting temporary and unnecessary files (Ccleaner/Disk Cleanup) to reduce backup size.

Backup old computer (just in case): Use Acronis True Image/Macrium/EaseUS Todo to do a full image copy of the old computer, this saves everything and is searchable for missed information.

User Files: If multiple user login accounts are available, each user will have to do this process.

1. **Copy Old Files:** Copy everything from the c:/users/{username} folder(s) to an external HD. A flash drive can sometimes be used if few files are involved; however, the size of the files to be copied may be larger than a flash drive. If available, copying the files to another device on the network also be done. It is not recommended to copy the old files directly to the new computer, this can overwrite files on the new computer.

Copy the entire c:/users/{username} folder, not just the subfolders. By copying the entire folder, all hidden and user system files (i.e., the 'AppData' folder) are also copied. Some files may have errors during copy, ignore them. This copy should be considered a backup and kept for some time.

One also should check that user folders not in the classic Windows file and folder structure are also copied/backed up. These may be in other partitions or drives on the same computer.

2. **Copy to New computer:** When copying the backup files to the new computer, only the main user subfolders (Desktop, Documents, Downloads, Favorites, Music, Pictures, and Videos) should be copied. Do not copy the other folders, especially the AppData folder, as there are many extraneous files in these folders that can mess up the new computer user account.

Other information that may need to be transferred to the new computer:

Browsers may contain bookmarks, favorites, and passwords. This may include multiple browsers such as IE, Edge, Chrome, Firefox, and TOR.

Emails may be locally stored in the old computer in the AppData folder. This is likely when email clients are using POP3 rather than IMAP. (though POP3 is seldom used now.) Webmail Users (accessing email through a browser) are not affected by this.

Program installers and **product or activation keys**. Since programs cannot be directly copied from computer to computer, make sure one has installer programs and any needed registration information for the new computer. These may or may not be available on the old computer.

Recommend making and saving **screenshots** of the desktop, start menu, and other configuration screens.

Recommend using Ccleaner's Tools / Uninstall tab "Save to text File" option on the old computer to save a record of all **installed programs** for reference. This is also an effective way to review those installed programs and decide what is needed on the new computer.

Accounts: Login names & passwords for accounts must be available to setup the new computer

Drivers: "Double Driver" can aid in reinstallation of old hardware by backing up drivers – not needed for new computers.