

Desktop, Laptop, Tablet, SmartPhone: Which is Best for You?

In order to have a computing device that you can use, you need a processor, a display, a method for input, storage, and a connection to the outside world.

Desktop Computers are large and often heavy, and not portable. They use a separate display (monitor) and a separate keyboard and mouse. That said, you can choose whatever you want for display, keyboard, and mouse. Internal storage (hard disk space) is usually generous, and more storage can be added internally or externally. There's often a built-in CD/DVD drive. There are plenty of options for connections. These are the most easily upgraded and expanded, and usually the most capable (powerful). If elements fail, they are separately replaceable. Wire them to a network or use a WiFi connection. Mac Mini computers are in a special class of very small desktop computers, which are not as upgradable as other desktop computers. There are other computers like this that run Windows as well.

All-In-One Computers are a little more compact than a desktop computer, and feature a built-in screen. They are less upgradable and less easily repaired than a separate desktop computer. If the screen fails, the computer is useless. If the computer fails, the screen is pointless. They may have a touchscreen.

Laptops are designed to be portable. They are not easily upgraded or expanded and often have less powerful processors (to conserve battery life). They are not easy to repair or upgrade. Screen size is whatever is built in. Everything is in the same package – display, keyboard, trackpad, battery. Battery life is a big consideration with laptops. They often have a built-in camera for video conferencing. They connect to wired networks or use wireless (WiFi) connections; some may offer options for cell data service (3G or 4G data). External devices like mice, keyboards, storage, and even video projectors can be attached

Operating systems tell the hardware (CPU, drives, display) what to do – they control input and output and connections to networks and external devices. For desktops and laptops, two are most common: Mac and Windows. The operating system has the biggest affect on how the computer feels to the user. People used to get into fistfights about which OS was better.

Software means the additional programs and applications you can add to the operating system to allow you to do things with your computer. Another new term for software is *apps*. For most computers with Mac or Windows operating systems you can purchase software on a CD or DVD or download it from the internet. Software licenses sometimes allow you to install the software on more than one machine. You can often transfer the license, or sometimes sell the software to someone else. More and more software is available from app stores online.

Cloud-based OS computers like the Google Chromebook are an old idea made new. It's a stripped-down computer that connects to online services and programs over the internet to work. Chromebooks are light, easy to keep up to date, and interesting as a possibility for a second computer.

Tablets are small and thin, extremely portable with a built-in display in a flat case. They have touchscreens and on-screen keyboards (but you can use a separate wireless keyboard, which may

even be part of the case). For storage you use what the tablet has built-in or cloud-based storage. No CD/DVD drive; few options for connections to other devices. Usually have built-in cameras, sometimes both front and rear. They connect to wireless (WiFi) connections or use optional cell data networks (3G, 4G) which would require a data plan. Their hardware cannot be upgraded or expanded, and they're difficult to repair. There are several operating systems common in tablets (Android, iOS (Mac), Windows 8, etc.) Download software over their internet connection from app stores or load from a connected computer.

eReaders are a special class of tablets designed to work best for reading text. Some can surf the web, check email, load apps, etc. When choosing, consider where reading materials might come from. Some are backlit like other computer screens, some need light to be read like a book.

Apps for tablets (and smartphones) come from app stores – there are several (iTunes App Store (iOS), Google Play (Android), Windows Apps Store) and apps from one are not interchangeable with apps from another. You register to purchase and download apps. Tablets can often use a computer to load software, music, photos, games, etc.

Smartphones are cellphones with computers built into them. They are a lot like tablets with a built-in phone; they also use built-in or cloud storage, and can connect to a computer to upgrade their OS and install software. For data they connect to WiFi or to a cell data network (3G, 4G) and most require a data plan along with their cellphone contract. They're difficult to repair and fairly expensive; for that reason don't drop them into the sink. There are devices (like the iPod Touch) that are like smartphones without the cellphone.

Side-by-side comparisons:

Smartphone:

- Extremely portable
- Comes with a phone!
- Designed for on-the-go
- A digital camera always with you
- Your email, internet browser, and apps always with you
- Cellphone data plans (\$\$\$)
- Difficult to type
- Thousands of apps; may be able to share with tablet

Tablet:

- Larger display, easier to view
- Can touch-type with on-screen keyboard
- More like reading a book
- Often available with or without a data plan (use WiFi connection)
- Larger touchscreen for manipulation of photos, drawing, easier to press buttons
- Thousands of apps; may be able to share with smartphone

Tablet

- Very portable and lightweight
- Not all that great for extended typing
- Hold it like a book - great for eBooks
- Touchscreen for apps that use that feature
- Not easily repairable
- Inexpensive apps

Laptop:

- Larger screen, high resolution
- Built-in large keyboard and trackpad
- Easy to attach mouse
- May not have a touchscreen
- Easy to attach external devices, monitors, storage
- Can be opened and upgraded or repaired

Laptop:

- Limited screen size
- Keyboard and trackpad are built in
- Can't add a touchscreen
- May need external storage or CD/DVD drive
- More expensive
- More expensive to upgrade or repair
- Batteries

All-In-One:

- Large screen sizes available
- Needs separate keyboard and mouse
- Large storage available
- May have built-in CD/DVD drive
- Upgradable (to an extent)
- Can't easily add a touchscreen
- Takes up less space on a desk

All-In-One

- Screen sizes limited
- May be difficult to repair
- If display fails, CPU is useless (and vice versa)
- Internal storage limited
- May not have built-in CD/ DVD drive
- Upgradable (to an extent)
- May have a touchscreen
- Not too difficult to move

Desktop

- Large, not portable
- Any screen size available
- The easiest to upgrade and repair
- If one component fails, the others can be used
- Large internal storage available
- Probably has built-in CD/ DVD drive
- Could use an external touchscreen

Checklist

- Would a large display be best for your eyesight?
- Is typing on a full-size keyboard important to you?
- How about a mouse vs a touchscreen?
- Is there a screen resolution that is critical for what you need to do?
- Does it need to be portable? How important is connecting external devices?
- What software will you need?
- Might more than one device be best for you?
- Will they work together? How long do you expect to use the device(s)?
- Will you want to get an extended warranty or other insurance for your device?
- Do you have a fast internet connection available?
- What's your support network like?
- Is there someone you know who can help you with devices from specific manufacturers or certain models?

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