

Anatomy of An Electronic Device

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Sometimes when you need help, the person assisting you will give you instructions that might as well be gibberish. “Check you’re using the video card rather than the motherboard port and that you’re using HDMI rather than VGA.”

If you don’t know what any of those things are—or what they look like—you’re left staring at your device feeling like you know less than nothing about anything.

The purpose of this handout is to give you a reference, so when someone says “HDMI” you’ll have some idea of what that is—and more importantly, what it looks like.

We’ll start off with different ports and cables (the funny looking holes in your device and the things that are plugged into them) and then look at some devices and what you might see when you look at them.

Ports and Cables

One of the most important things to know about your device is what kind of ports it has and what kind of cables go into those ports.

Video (Monitor) Cables

These are the cables that run from your computer to your monitor, or from your Blu-Ray player to your TV. There are a lot of video cables out, so here is a close look to help you tell the difference.

VGA

VGA (Video Graphics Array) was first introduced on the market with the early IBM (International Business Machine) computers in 1978 and was the standard for years.

VGA connectors carry analog RGBHV (red, green, blue, horizontal sync, vertical sync) video signals.

DVI

DVI (Digital Visual Interface) is a video display interface developed by the Digital Display Working Group (DDWG). DVI came onto the market in 1999. It was designed to create an industry standard for the transfer of uncompressed digital video content and be a replacement for the analog VGA.

Cable length is generally limited to 15 feet for higher resolution display.

HDMI

HDMI (High-Definition Multimedia Interface) is a proprietary interface for transferring uncompressed digital video content AND compressed or uncompressed audio. HDMI was developed in 2002 by seven different companies, and went onto the market in 2003.

The biggest advantage of HDMI is that it carries both audio and video signal, meaning you don't need multiple cables. Cables can be up to 15 meters without signal degradation. Unlike VGA, there is no loss of fidelity between DVI and HDMI.

Mini-HDMI

There are also mini-HDMI ports and cables. These are (as expected) smaller than HDMI, and are used most often for portable devices, such as [DSLR](#) cameras and portable monitors.



DisplayPort

DisplayPort (DP) is a digital display interface developed by a consortium of manufacturers and standardized by the Video Electronics Standards Association (VESA).

It can carry video, audio, USB and other signal types. DisplayPort cables can be up to 2 meters in length without any signal degradation.

Mini-DisplayPort

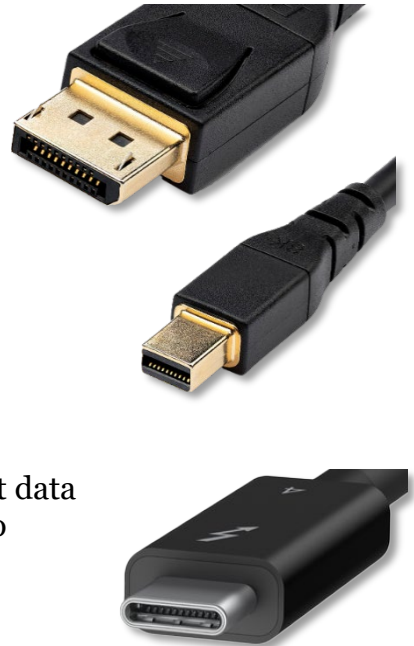
There is also mini-DisplayPort, which was developed by Apple and went into production in 2008. You will find mini-DisplayPort on Apple products and some older laptops.

Thunderbolt

Thunderbolt looks like USB-C, but can carry more data (and carry that data faster) than a “plain” USB-C cable, while also carrying audio and video signal.

Video Ports

Even once you can see the different types of cables, it can still be hard to tell the types of ports at a glance, so here are some video cables and the ports into which they go.



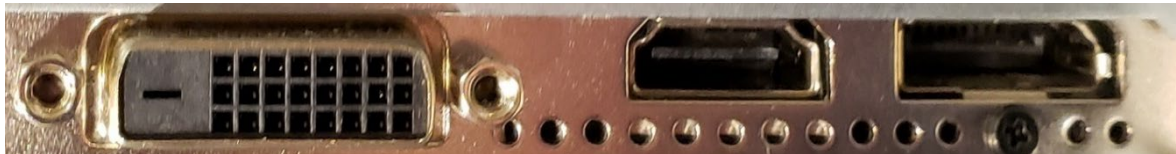
DVI



HDMI



Display Port



VGA



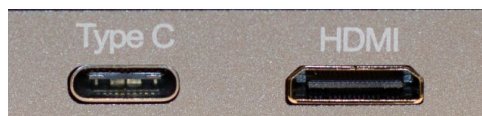
USB-C



Mini-HDMI



Thunderbolt



Network Cable

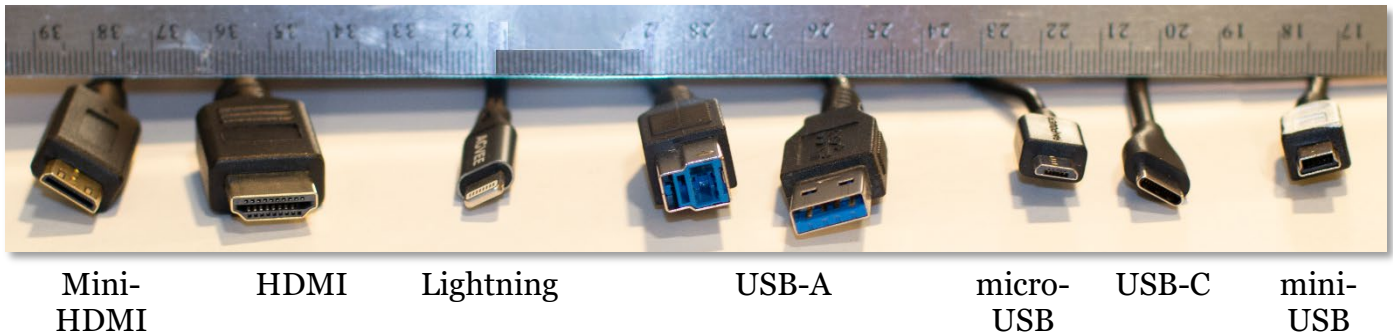
A network cable is used to connect your computer to your modem and looks like an extra-wide phone cable.



Even if your computer is wireless, it's often helpful to have a network cable, both for network security and for testing if your wireless goes out.

Cable Size Comparison

Here are several different types of cables side by side, with a ruler, to help you figure out which specific cable you have.



USB

There are approximately a zillion different types of USB cables, so it helps to know what you are looking at when you try to determine what a cable does.

USB stands for Universal Serial Bus, and USB was implemented to eliminate proprietary cables (remember when every cell phone had a unique charger cable?). Because USB has evolved and improved over time, and because there are so many different types of devices that use USB cables, you will need to check your ports and your cables to see what matches.

USB-A Cables

USB-A was the standard for many years. Printers still mostly use USB-A to USB-B to physically connect to a computer. USB-A is the flat end that goes into your computer.

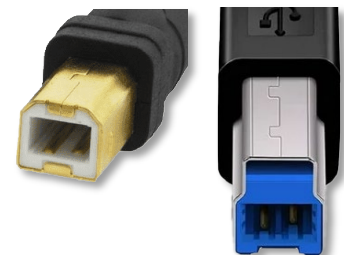


There are different versions of USB-A cables. USB 1.0 cables are generally white, while USB 3.0 (faster) cables are often blue.

USB-B Cables

USB-B is the wider end that goes into devices such as printers.

Like USB-A, USB 3 cables are faster, and often have blue parts and are taller, so they cannot be used in USB 1 ports.



Mini-USB Cables

Mini-USB cables are frequently used with cameras and external hard drives. Mini-USB cables are wider on one side.



Micro-USB Cables

Micro-USB cables were the standard data and charging cables for most Android phones, and are still the common in things like speakers, headphones, & rechargeable mice, because the port is so slim.



Micro-USB cables are just the tiniest bit wider on the bottom, and you have to look closely to see that. I recommend using nail polish or a sharpie to mark the “top” (smaller side) of the cable, to make it easier to plug in.

USB-C

USB-C is the new standard, and most devices are switching to it. Unlike other types of USB it has “reverse plug orientation” which simply means there is not up or down side. It is also small, which means it can be used with small devices. USB-C has the ability to transfer data, power, video, and audio.



HOWEVER

Not all USB-C cables and not all USB-C ports can transfer data, power, video, and audio. This means you need to get out a magnifying glass to check the markings on your cables and ports. This is annoying, but far better than every device having a unique, proprietary cable and port.

Thunderbolt



Thunderbolt cables are cross compatible with USB-C cables. They are often used in docking stations. The primary difference between USB-C and Thunderbolt is speed—Thunderbolt is faster, which is why it is preferred for docking stations.



How do you tell the difference at a glance? *Sometimes*, Thunderbolt ports and cables will be marked with a lightning bolt. When buying, Thunderbolt cables are more expensive.

Common USB Ports and Cables

USB A		
USB B		
USB 3.0		
Mini USB		
Micro USB		
Lightning		
USB C		
SuperSpeed USB		
SuperSpeed with Power		
USB 4 40 Gbps		
USB DisplayPort Alt Mode		
Thunderbolt		

Anatomy of a PC Desktop Computer

Every computer is different, but the majority will have similar features to those below.

Desktop Ports, Front View

Power

Headphone Jack

USB Ports

USB

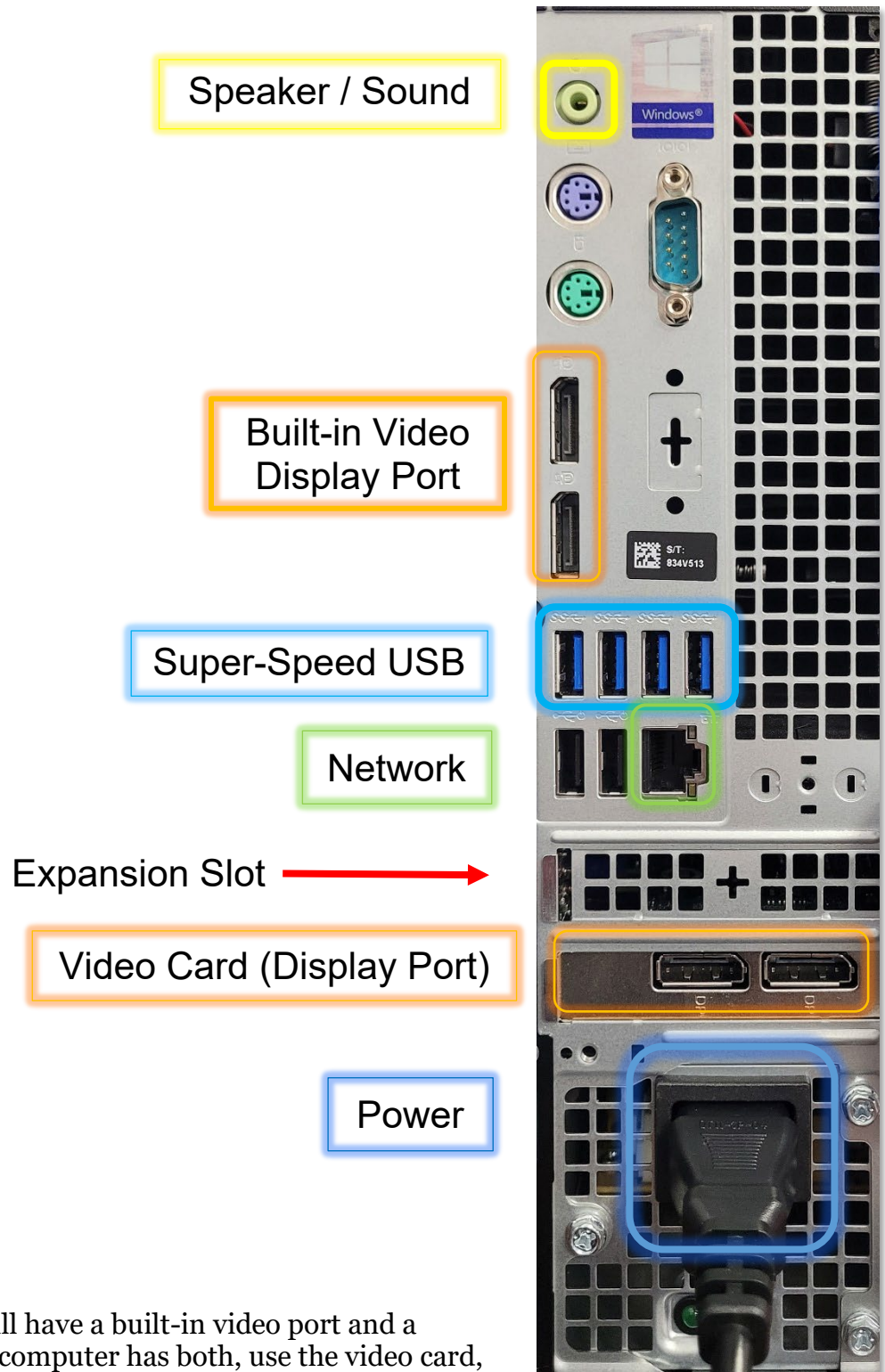
Powered USB

Super Speed USB

Super Speed USB C



Desktop Ports, Rear View



Some desktop computers will have a built-in video port and a separate video card. If your computer has both, use the video card, which should give you higher quality video.

A video card goes in an expansion slot, which is place to add new devices to the motherboard (and case). Not all motherboards have expansion slots, even a case looks like it has space.

Desktop Ports & Cables

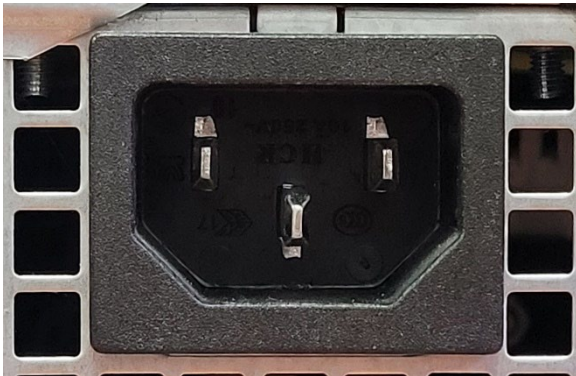
Network

See page 4 for details on network ports and cables.

Power

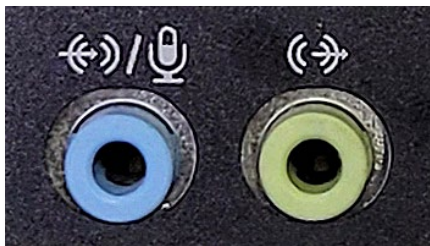
Most desktop computers and monitors (and many other devices) will use a standard power cord. This means that when you replace your computer you can use the existing power cord and don't have to crawl around to replace it.

One end will be the normal three prong plug you put in your wall outlet, the other will have three rectangular slots that go into the back of your computer. This is the connection to the Power Supply inside your computer.



Sound

Most desktops have a sound jack—a round port that can take a 3.5mm headphone plug. Many new headphones and speakers are Bluetooth or USB-C instead of 3.5mm, so you may not use your sound jack.



If your computer has multiple jacks, one is likely for input (microphone) the other for output (speakers).



(headphone,

Your computer can have sound built into the motherboard or use a separate sound card.

USB

See page 4 for details on USB ports and cables.

Video

See page 2 for details on video ports and cables. A desktop can have video built into the motherboard or have a separate video card.

Monitor

The easiest way to deal with a monitor is to pay it face down on a table, If you can rotate the pedestal—even better! This will give you a clear(er) view of the ports available and what kind of video cable you will need to attach the monitor to your computer.



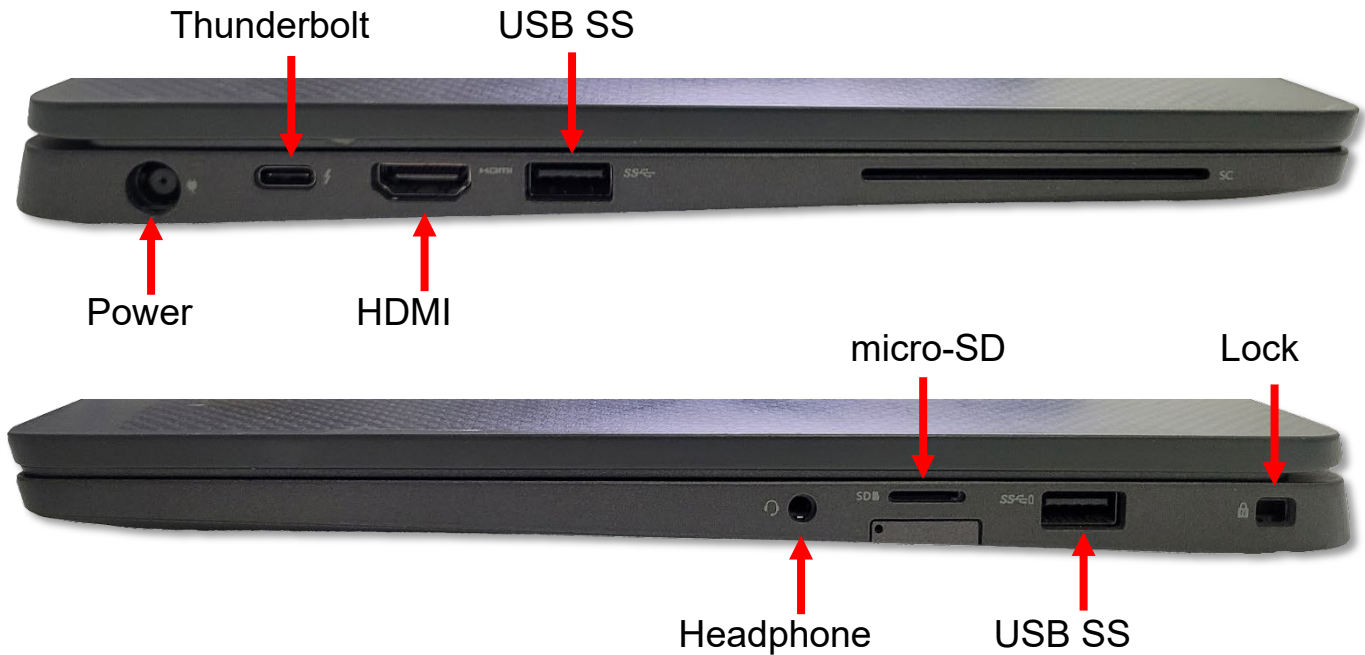
This monitor can use HDMI and DisplayPort cables and has spots for USB and audio.

Anatomy of a Laptop



You can plug a keyboard, mouse, and monitor up to a laptop, to make it easier for use for longer periods of time, and if your laptop is your primary computer, you can even get a docking station, which allows you to attach and remove all the peripherals from a single thunderbolt or USB-C port.

Laptop, Side Views



Keyboard

The keyboard is one of the two primary input devices on your computer. In addition to entering data, the keyboard also allows you to command the operating system and programs.



Use the **Tab** key and the **arrow** keys to move around the screen.



The Windows key, located near the Alt and Ctrl keys, provides access to a variety of Windows commands.

For example, to shut down a windows computer without a mouse, tap the **Windows** key on your keyboard, then use the **arrow keys** to move through the menu until you reach the **Shut Down** command, then press the **Enter** key on your keyboard.

If your laptop keyboard stops working, you can plug a wired keyboard into a USB port.

Trackpad / Touchpad



The touchpad is the laptop's mouse, and allows you to move your cursor around the screen. Drag your finger around the trackpad to move the cursor, the lower buttons are your left and right mouse buttons.

Some Trackpad commands:

Select an item	Tap on the touchpad
Scroll	Place two fingers on the touchpad & slide horizontally or vertically
Zoom in or out	Place two fingers on the touchpad & pinch in or stretch out

If your touchpad stops working, you can usually plug a wired mouse into a USB port.

Camera



Some laptop cameras have a slide to cover the camera lens. If your video doesn't appear when using programs like Zoom, check to see if your camera has a cover.

Laptop Ports



Headphone



micro-SD



Super-Speed USB



Network



Thunderbolt



HDMI



Super-Speed USB



HDMI



mini-Display Port



Docking Station

Because laptops have so few ports, docking stations are used to expand the device capabilities. Many hybrid workers will have a docking station at home and a docking station at work, which allows them to take their computer back and forth, without having to carry keyboards, monitors, mice, etc back and forth.

Docking stations use Thunderbolt cables to connect to the Thunderbolt port on a laptop.



Here is my docking station setup, with keyboard, mouse, monitors, speakers, and USB hub. My husband uses it when he works from home, and *also* on game nights with his personal computer—all we do is just switch out the laptop.

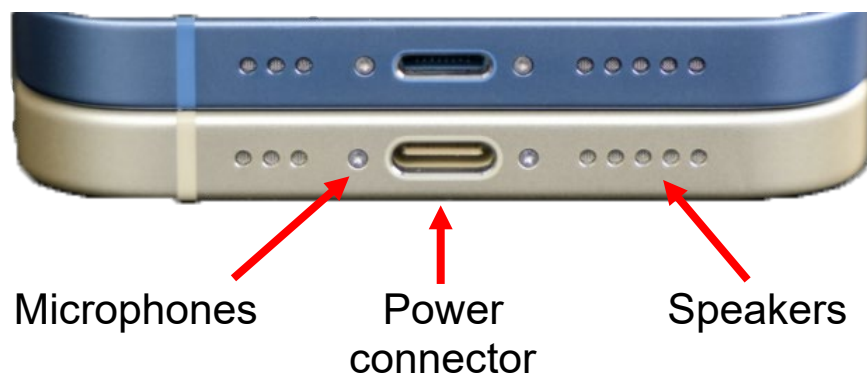


Docking Station

Anatomy of an iPhone

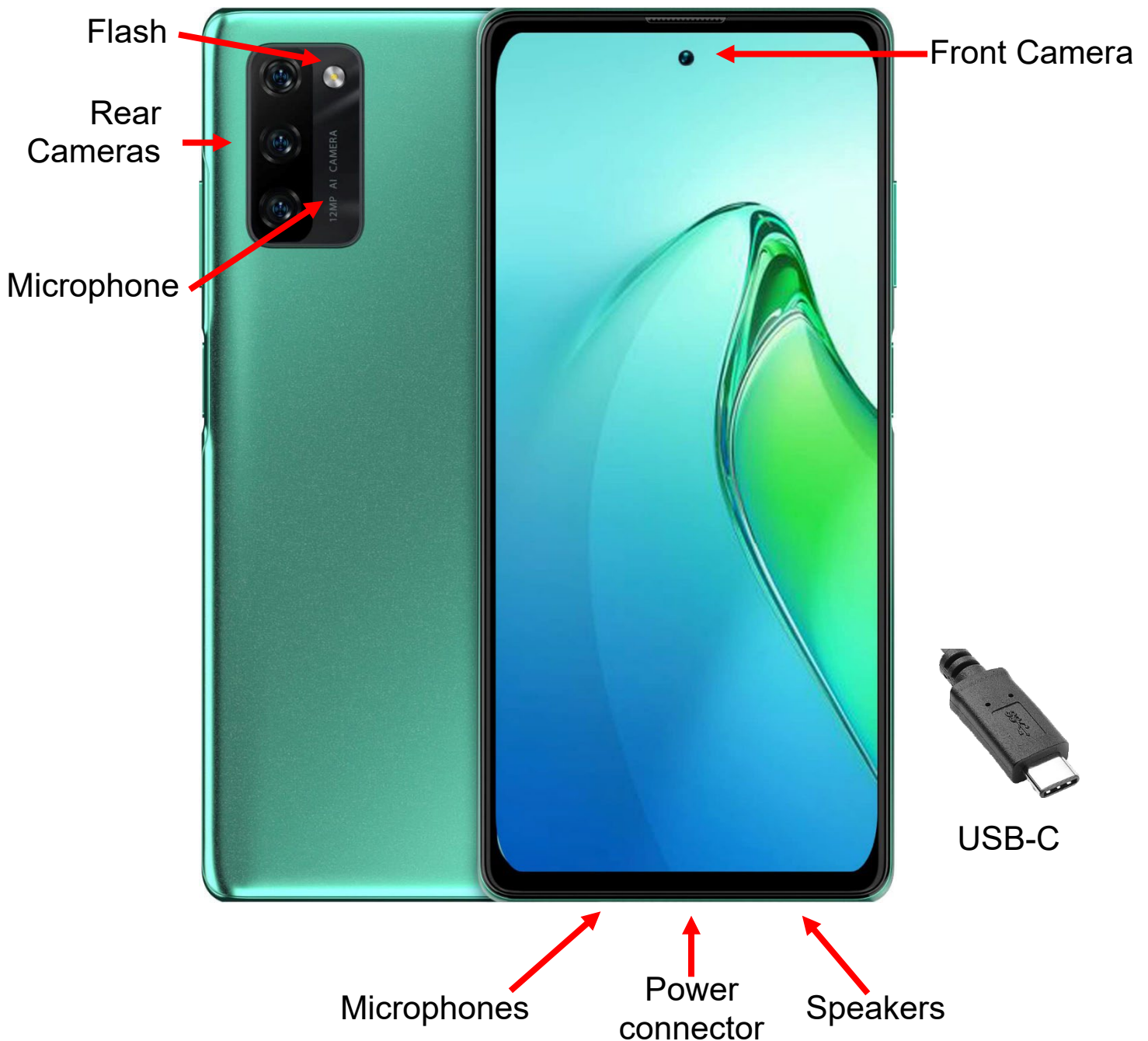


In 2023 the iPhone came in line with industry standards and switched to USB-C. Previously, starting with the iPhone 5, it used a lightning connector.



Anatomy of an Android Phone

Unlike iPhones, which are strictly standardized by Apple, Android phones vary from maker to maker, and from version to version. A Samsung Galaxy S24 is going to be different from a Galaxy S9 and just a different from a Motorola Moto or a Google Pixel. This means that you may want to physically hold the different devices to see which is most comfortable.



Android phones should come with a USB-C port, and many come with wireless charging. You will need to check your device to determine what port and charging ability your phone has.

Wireless Charging

Even better than all phones moving to a standard cable, many portable devices have wireless charging. You sit your device on the dock and it begins charging—no fussing with cables.

Unfortunately, not all portable devices have this—my old smart watch did, but my new smart watch does not (and in fact has a proprietary charging cable—UGH). But it is great to have when it's an option, since it can significantly reduce the number of cables lying around.

Most wireless chargers will work through a protective case—but not all—so keep that in mind when looking for both a charger and a phone case.

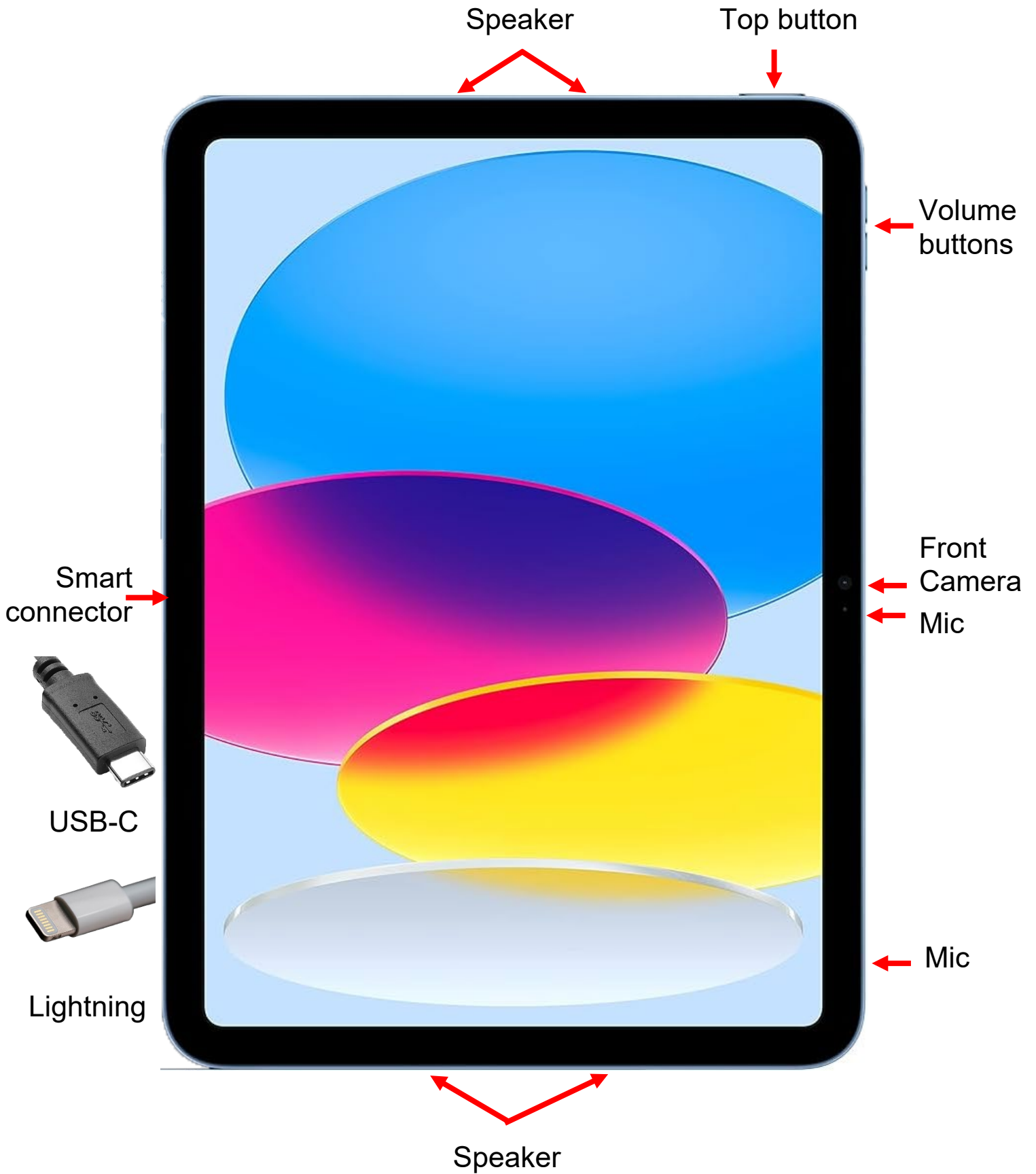


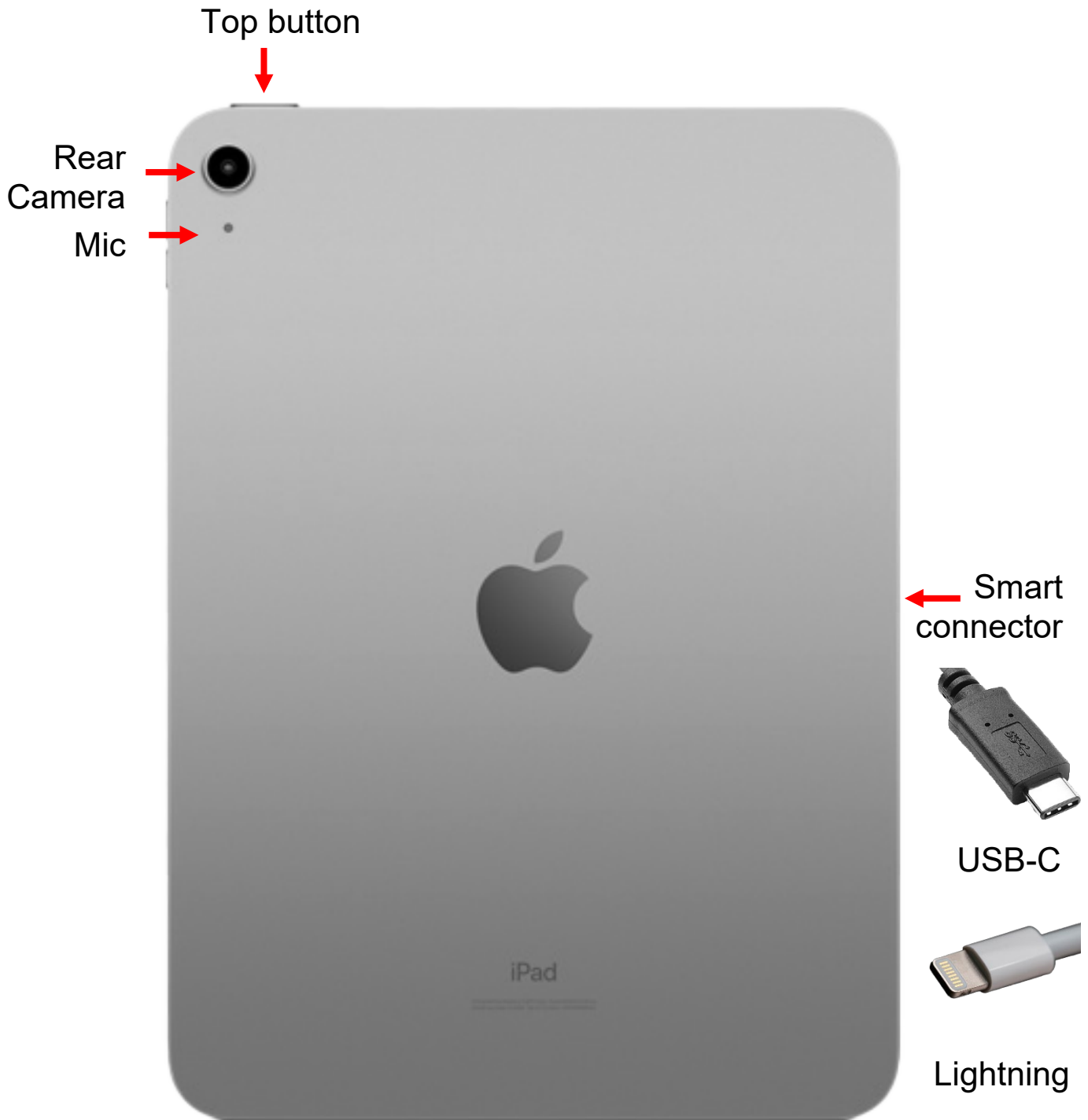
You can even buy wireless chargers that look more like art than a chunk of electronics.



Note: Wireless charging is actually an old idea, first pioneered by Nikola Tesla.

Anatomy of an iPad





The location of buttons and cameras will vary from model to model.

Older iPads will still have a lighting port, while newer iPads should have a USB-C port and a newer iPad Pro should have a Thunderbolt port.

References

[70 Windows 11 Keyboard Shortcuts to Master Your PC](#) (CNET)

[Touch gestures for Windows](#) (Microsoft)

[Windows Keyboard Commands](#) (Microsoft)

[See Every Single Part Inside an iPhone](#)

[11 Windows touchpad tricks to help you work faster and smarter](#) (ZD Net)

[Wireless chargers](#) (Wired) [this is a “Best” article but does a good job explaining speed and compatibility]

[Wireless charging explained: What is it and how does it work?](#) (Computer World)

[Tesla’s Wireless Power](#) (Tesla Science Center)

[A Century After Tesla, Wireless Power Transfer May Finally Be Delivering](#) (EE Power)

Technology Glossary

5G

The fifth generation technology standard for cellular networks. It can support up to 10,000 devices per cell and have download rates up to 10 gigabits per second

Add-on

An accessory piece of software designed to increase the capability of the software to which it is appended.

Address Bar

In a web browser or windows explorer, it is a rectangle, usually towards the top of the window, that shows you the current location or address of your web page or file.

Address Book

See [Contacts](#)

Adobe Digital Editions (ADE)

Adobe proprietary format for eBooks.

Alexa

Amazon's virtual assistant.

Algorithm

A set-of rules to be followed in calculations or problem-solving operations. Algorithms are frequently used to manipulate data sets.

Android

Googles mobile operating system, built on open source software.

Anti-Virus

A program that protects you from malicious software. Most anti-virus programs have options for purchasing additional security measures such as firewalls, email scanning, etc.

App

Short for [Application](#).

Apple ID

This is the username and password that you create with Apple to link a specific device to your Apple account. If you have an iPad and an iPhone, you use the same Apple ID with both of those devices.

Apple

Technology company that designs and develops hardware and software.

Application

An application is a piece of software that lets your device do something, like play music or give directions. An application is the same thing is a program.

ARPANET

Advanced Research Projects Agency NETwork. The first true internet, it connected military installations, a handful of universities, and some third-party contractors together.

Autocorrect

Auto correct is when your phone automatically changes what you were typing to what *it thought* you wanted to type.

Autoplay

When you visit a website and music or video starts playing without asking.

AVI

Audio Video Interleave. A multimedia format for audio and video files.

AZW / AZW3

Amazon proprietary eBook format.

Backbone

Long-distance networks that carry data between data centers and consumers

Backup

A copy of computer data that is taken and stored somewhere else, to be used in the event of data loss.

Bandwidth

The amount of data that can be transmitted at one time. It is measured in bits per second

BCC

Blind carbon copy. Covertly send a copy of the message to a third party. The primary recipient cannot see the person was added.

Biometric

Unique physical characteristics that are be used for recognition. The most common types of biometric identifiers are fingerprints, voice, face, iris, and palm/finger veins.

Blockchain

Also Block Chain. A list of records (blocks) linked using cryptography. These records are a cryptographic hash of the previous block, a timestamp, and transaction data. Blockchains are generally used on a peer-to-peer network. Data in one block cannot be altered without changing all other blocks.

Bluetooth

A wireless technology that allows data to be shared over short distances using short-wave UHF radio signal. The name comes from Harald "Bluetooth" Gormsson, king of Denmark and Norway, who united the Scandinavians.

Boolean

A system of logical propositions. Common Boolean operators: AND, OR, NOT, “ “, () . Based on the work of George Boole.

Broadband

A fast, reliable, always-on connection to the internet.

Browser Add-on

See [Browser Extension](#).

Browser Extension

A small software module that is used to customize a web browser.

Browser Hijack

Where a malicious piece of software modifies a web browser's settings without your permission.

Browser

Short for [Web Browser](#).

Brute Force Attack

Where a hacker tries many passwords for passphrases in an attempt to break into an account. The longer the password (or passphrase) the harder it is for someone to succeed with this type of attack.

Byte

A unit of digital information that consists of eight bits. A byte is the number of bits used to encode a single character of text.

Cache

Temporary storage space that allows your computer to quickly bring up information, such as previously viewed web pages.

Cambridge Analytica

A British political consulting firm that used misappropriated digital assets, data mining, and other processes to influence political elections around the world.

Causation

Relation that holds between two temporally simultaneous or successive events when the first event (the cause) brings about the other (the effect). **NOT** the same as [correlation](#).

CC

Carbon copy. Send a copy of the message to someone else. The primary recipient can see this person received the message.

Cellular Data

The connection a cell phone makes to a cell tower that allows you to do things like surf the internet, download emails, and send MMS messages.

Cloud

Storage that is physically somewhere other than where you are. Cloud storage is generally accessible from multiple devices, because those files are stored on a hard drive that belongs to a company that hosts the cloud service. Cloud storage is like a self-storage unit for your electronic files, except you can access your stuff from anywhere.

Cloud Service

A service provided by a third party or company that allows you to provide access to files and applications remotely.

Codec

A device or program that encodes/decodes a data stream, such as an audio file, for storage.

Contacts / Contact List

A collection of screen names and the various data associated with them, such as email addresses and telephone numbers.

Cookie

A piece of data that a website saves on your computer. Cookies were designed to save user information such as preferences or logins but can sometimes be read by third parties. Cookies are also used to collect browsing data long-term.

Correlation

A mutual relationship or connection between two or more things. See also [Causation](#).

Cortana

Microsoft's virtual assistant.

CPU

Central Processing Unit. The bit of a computer or electronic device that processes information.

Cryptocurrency

A digital asset that uses strong cryptography and is designed to work as a form of money. They used decentralized control, or a public financial database to keep track of who owns what.

Cryptography

Greek for “hidden writing”, it is the study of secure communication—creating protocols to keep third parties from reading private messages.

Data Breach

The release of secure or private information. A data breach can be accidental or malicious, such as when an individual hacks into a system to steal information.

Database

An organized collection of information. Complicated databases link information between multiple tables allowing for analysis of the contained information. An address book is a basic database.

Data Center

Room(s) full of servers that store user data and host online apps and content.

Denial of Service Attack (DOS)

A cyber-attack where the malefactor seeks to make a network resource (such as a website) unavailable by flooding the target with requests or visits.

Dial-up

An early way to connect a home computer to the internet. A phone line was used to connect a personal computer to the Internet Service Provider.

Directory

A system that catalogs / organizes computer files.

Displayport

A high-quality audio-visual cable capable of transmitting HD and 4k.

DMCA

Digital Millennium Copyright Act. The 1998 United States copyright law that criminalizes production and dissemination of technology, devices, or services that circumvent measures to control access to copyrighted works (DRM).

DNS

Domain Name System. The phonebook of the Internet.

DNS Hijacking

Where a malefactor redirects visitors from a valid website to a different destination—often one that exists to steal data.

Domain Name

The string of text that identifies a place on the Web. A basic domain name is a word or abbreviation followed by a period followed by the domain extension: wvu.edu

Domain

The sometimes arbitrary grouping that designates what a website does or where it is based. The most common domains are .com .net .edu and .org. The domain is what you should check first when you want to verify the authenticity of a website.

Download

To move data and files from the internet or a server to your computer or mobile device.

DRM

Digital Rights Management. A format that protects electronic media from being illegally copied.

DVD

Digital Video Disc / Digital Versatile Disc. A digital optical disc data storage system.

DSL

Digital Subscriber Line. A fixed connection to the internet that runs through copper phone lines.

DSLR

Digital Single-Lens Reflex

DVI

Digital Video Interface. A video display interface that connects your computer to your monitor.

eBook

An electronic file formatted (for the most part) to be read on a small handheld device, or on a computer screen in an eReader program / app.

eInk

A brand of electronic paper (e-paper) display technology from the E Ink Corporation (1997)

Email Header

The portion of an email message that contains the routing information. The header can be used to help determine if a message is fraudulent.

Email

Email is an electronic letter sent from one email address to another email address. Email addresses always have an @ (at sign) in them. Sending an email on your phone requires the use of cellular data. Each email address is unique, and email addresses are often used as unique identifiers or login credentials by databases.

Emoji

Small images used to represent emotions, ideas, or expressions. 😊

Emoticons

Representations of facial expressions using keyboard characters. These are used to portray moods or feelings. For example, a smiling face could be :) or ☺

Encryption

The encoding of data so that only authorized persons or devices can read/view the information. The stronger the encryption, the more unlikely it is that a malfeasant could decode the intercepted data through a brute force attack.

EPUB

Electronic Publication. A digital book format that allows you to read your eBook on any electronic device. EPUB files are reflowable.

eReader

eBook reader that use black and white eInk screens that give a similar reading experience to physical books.

Ethernet

Wired networking technology that allows multiple computers to talk to one another via a protocol (set of rules). Ethernet is used when speed, stability, and security are needed.

EULA

End-User License Agreement. The legal contract between a software vendor and the user of that software. It specifies the rights and restrictions which apply to the use of the software.

External Storage

Devices that store data outside of a computer or other electronic device. They are often removable, such as USB thumb drives.

Facebook

An online media and networking company.

Facial Recognition

Technology capable of identifying or verifying a person from a digital image. Facial recognition can be used to unlock an electronic device.

Fiber Optics

A flexible glass or plastic fiber that can transmit light signals with very little loss of strength

File Extension

Also called a filename extension or file type, is the identifier suffix for a computer file name, and tells you the kind of program needed to open the file. By default, these extensions are hidden, but can still be used in search. If you change a file extension, that file will most often break.

Firewall

A security system that monitors incoming and outgoing network traffic to prevent unauthorized access to a system.

Fixed-layout

Content remains locked in a specific place, when the document is enlarged you often have to scroll around to read the entire thing. A pdf is a fixed-layout document

Folder

See [Directory](#).

Follow

Choose to see another user's posts in their content feed.

Force Stop

A way to completely stop an app that is running in the background. An app that has been closed may still have bits active and collecting data.

GB

Gigabyte. A computer memory unit equal to 1000 megabytes. The prefix giga means 10^9 .

GIF

Graphics Interchange Format. An image format that is often used in logos and animated pictures.

Google

A technology company that specializes in services and products related to the internet.

GPS

Global Positioning System is a piece of hardware that allows a device to contact a satellite to determine the location of the device in latitude and longitude. On most devices, software makes these data points usable to the end user by placing them on a map.

GUI

Graphical User Interface (pronounced gooey). The windows, icons, menus, and pictures that allow you to interact with your computer using your mouse. Windows 10 and Mac OS (Big Sur) are operating system GUIs.

Hard Drive

A data storage devices that stores and retrieves digital data. In your computer, this is where all your programs are installed and files saved.

Hardware

The electronic components of a device; the bits you can touch. A cell phone, a keyboard, and a CPU are all hardware.

HD

High Definition. Generally a higher resolution and quality than standard definition video.

HDMI

High-Definition Multimedia Interface. Audio/video interface for transmitting uncompressed data. Cable that connects your computer to your monitor, or your DVD player to your TV.

HDR

High Dynamic Range. A photographic process where a camera takes multiple pictures at different exposures and combines them into a single image—this allows all areas of your image to be well-exposed, but can also look unreal if used too much.

Heat Map

A heat map is a visual representation of data that allows you to see phenomenon as clusters or over space.

Home Screen

The main screen of a computer or mobile device. Home screens are typically personalized by the user so that no two home screens will look alike.

Hotspot

A type of Wireless Access Point. A device that allows you access the internet from a public place. Hotspots are generally open and unsecured and you should assume any data you submit is visible to people with ill-intent.

Hover text

When you hold your cursor over a hyperlink, the document should display the URL for that link. This allows you to verify links.

http

Hypertext Transfer Protocol is how data is moved between a website and an end user.

https

Hypertext Transfer Protocol (Secure) is an encrypted form of http. This protects against interference or snooping by third parties.

iCloud

Apple's cloud service.

Icon

A graphic representation of a program, file or function.

Information Security

The protection of data and the mitigation of risks, generally on computer networks.

Install

A process that writes the code used to run the program (application) onto the hard drive of your device. Installing a piece of software embeds it into the device and allows it to work.

Internet

A system of inter-connected computer networks.

iOS

Apple's mobile operating system.

iPad

Apple's tablet computer, running iOS.

iPhone

Apple's cellular phone, running iOS.

iPod

Apple's music player. The iPod is general similar to an iPhone, only without cellular service.

ISBN

International Standard Book Number. A numeric commercial book identifier that is unique for every edition and variation of a book.

ISP

Internet Service Provider. Company you pay so you can have internet at home.

iTunes

Apple's music service.

JPG / JPEG

Joint Photographic Experts Group. A [lossy](#) compression format for digital images.

Keylogger

Keystroke logger (also keyboard capture). A piece of hardware or a software program that can record every key struck on the keyboard.

LAN

Local Area Network. A group of computers / devices that share a common communications line.

Last Mile

The service from your local provider to your home.

Latency

The time delay between the sending and receiving computer.

Location Bar

See [address bar](#).

Location Services

Information from GPS, wireless access points, cell towers, and Bluetooth devices that helps your phone know where you are.

Lock Screen

The opening screen or interface of an operating system. A lock screen keeps unauthorized users from accessing the data and information on a device.

Lossless Compression

A form of data encoding that maintains the original quality of the file but at the cost of having a large file size.

Lossy Compression

A form of data encoding used to reduce file size at the cost of data quality.

LTE

Long-Term Evolution, A technology for mobile wireless broadband communication.

Malware

Software is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.

Mbps

Megabits Per Second. The speed of your internet service.

Messenger

An app that allows users to send text messages and images to other users in a system.

Metadata

A data set that give you information about other data. A card catalog contains metadata.

Micro-SD

Micro-Secure Digital Card. Smaller size [SD card](#), used in phones and lightweight devices. Comes with an adapter that allows for the transfer for files from a portable device to a computer.

MMS

Multimedia Messaging Service is a kind of text messaging that allows you to send text messages that contain pictures or audio, as well as messages longer than 160 characters or to multiple people.

MOBI

Mobipocket. The proprietary ebook format for the Amazon Kindle. MOBI files are reflowable.

Mobile Carrier

A wireless service provider that allows users to connect portable devices (such as phones) to the internet through a cellular service.

Mobile Data

Wireless internet access through a cellular data connection.

Modem

Modulator-demodulator. A device that converts data from a digital format to a format for analog transmission.

MP3

Moving Pictures Experts Group Layer-3. A coding format for digital audio.

MP4 / MPEG4

Moving Pictures Experts Group Layer-4. A coding format for digital multi-media, commonly video.

MPEG

Motion Picture Experts Group. A standard for encoding and compressing video.

NDA

Non-Disclosure Agreement. A legally binding contract where parties agree not to share sensitive or confidential information.

Network

A group of computers connected for the purpose of sharing resources. A network can be as small as two computers or as vast as the Internet.

News Feed

The main page of Facebook, where you see content posted by users you have chosen to follow. These content can be text or images.

Notification

A message displayed by an electronic device to provide an alert, reminder, or other communication.

Online Chat

Real time communication over the internet through (generally short) text messages.

OS

Operating System. The base upon which software and apps are added. An Apple device generally uses iOS (iPhones) or macOS (laptop computers). PCs typically used the Windows OS, but there are other operating systems, such as Linux that can be installed. Non-Apple cell phones frequently use some form of the Android OS. How your device looks and works is dependent upon the operating system installed.

P2P

[Peer-to-Peer](#)

Passcode

This is the secret code to get into a specific device. If you have an iPhone and an iPad, they can have different passcodes. You can sometimes use a fingerprint instead of a passcode to get into a device.

Password Manager

A program that stores electronic passwords.

Password

The secret code to access a restricted resources. Passwords are usually required to use a minimum of eight characters, and contain special characters, such as numbers or upper case letters.

PayPal

A method of online money transfer and payments.

PDF

Portable Document Format. Once an Adobe proprietary format, now one of the most common formats for sharing digital documents.

Peer-to-Peer

A distributed that shares tasks or work between devices of the same level.

Phishing

A fraudulent attempt to gain personal or sensitive information, by sending an email or creating a website that pretends to be from a real company or person, but is not.

Phreaking

An attack on the telephone system

Play Store

Goggle's app store, where users can download or purchase programs to run on their Android devices.

PNG

Portable Network Graphics. A [lossless](#) compression type for digital images.

Podcast

A digital audio file made available on the Internet for downloading to a computer or mobile device, typically available as a series, new installments of which can be received by subscribers automatically.

Post

A message, comment, image, or other item that is placed on the internet, generally on a website.

Predictive Text

An input technology that guesses what you want to type both from what you are currently typing and, if you have allowed the software to learn, from what you have typed in the past. Predictive text makes typing faster and easier if you have good software on the back end.

Privacy

The information that is shared between your device and the external resources to which it is connected, as well as how that information is used, and with whom that information is shared.

Program

A program is a piece of software that lets your device do something like send a text message or video chat. A program is the same thing as an application.

Public Network

An electronic connection where the traffic between devices is visible to anyone.

Reflowable

An ebook format that layout depending upon the output device. MOBI and EPUB are reflowable formats, which means the number of words on the page change, depending upon the page / text size.

Repeater

A device that extends the range of Wi-Fi signal.

Reply All

A response to an electronic message that is returned to ALL recipients of the original message.

Reply

A response to an electronic message.

Ripping

Extracting digital content from a container, such as a CD or DVD. Ripping a CD means that the music is copied without loss from the CD to your computer.

ROT-13

One of the most basic forms of encryption; a substitution encryption where characters are rotated 13 places.

Router

A networking device that forwards data between networks.

RTFM

Read The *Fantastic Manual*.

Scraping

Web scraping, web harvesting, web data extraction is extracting data from websites—gathering up information available on a public website.

SD

Standard Definition. The lowest quality rating for digital streaming.

SD Card

Secure Digital Card. Removable memory that is used in devices like cameras, because it can be easily switched out when full. Allows for easy transfer of files from device to computer without a cable.

Search

A computer command that allows you to find specific files on your computer that meet a designated category, such as file type, or date modified.

Search Engine

A software system designed to find information on the web. The results from a search engine can be webpages, files, or images. Generally, behind the scenes a program runs an algorithm that crawls through the web cataloging everything it sees. This catalog is then organized by a different program where pages are associated with various terms.

Security

Protecting electronic systems from theft or damage. This can be protection from physical theft, but often refers to electronic damage, where systems can be disrupted or data stolen.

Server

A device (or program) that allows you to access something not on the device you are physically touching. A mail server stores your email and drops it to your device upon request. A web server allows you to connect to the internet.

Settings

An app that allows you to customize your computer, device, or program.

Siri

Apple's personal assistant.

Smart Device

An electronic device that connects to other devices or the internet through a wireless protocol such as Bluetooth or Wi-Fi.

Smart TV

A television with a network port to allow you to watch streaming services (and other internet content) without having to use an additional device.

SMS

Short Messaging Service. A brief message that is sent from one phone number to another phone number. SMS does not use cellular data.

Snooping

Unauthorized listening in to data transmission.

Snopes

One of the first internet fact-checking resources, Snopes started as a site to debunk urban legends, but expanded into general fact-checking. (<https://www.snopes.com/>)

Social Media

Interactive computer technologies and websites that allow for the sharing of information. Facebook is the most famous social media site, and allows friends to connect automatically, but LinkedIn is another type of social networking site, that focuses on career and job networking.

Software

The programs that run on your computer or phone. Can also be called an application.

Sort

To organize information in a prescribed sequence, such as alphabetically, or oldest to newest.

Spam

Unsolicited electronic messages (especially advertising).

Speed

Download speed is how quickly you can pull down data from the internet. Upload is how quickly you can send data out to the Internet.

Spoofing

When a person or program pretends to be someone else, by falsifying data, to gain access to your account or data.

Spyware

A piece of malicious software that secretly installs itself to gather information about the user or device.

SSD

Solid State Drive. A storage device for your computer that saves data on chips instead of a mechanical platters.

Status Bar

A graphical element, usually at the top or bottom of a device's screen, that displays information about the state of the device. Some settings commonly found on the status bar are sound/volume, time, and battery life.

Streaming Device

An object, such as Roku stick or Fire stick, you purchase that plugs into your existing TV so you watch video through the device on your existing television.

Streaming Service

An online provider of entertainment (music, movies, etc.) that delivers the content via an Internet connection to the subscriber's computer

Switch

A device that connects to a router and provides multiple ports for wired connections.

Sync

See [synchronize](#).

Synchronize

When a file is synced, changes to that file are saved are pushed from one device to all other devices with access to that file, via a remote server.

Tag / Tagging

A keyword or term added to the metadata of a piece of information. In social media, when someone is tagged, they are alerted to a post made by another user.

Taskbar

A graphical user interface (GUI) that is typically along the bottom of your window, and usually shows you what programs are actively running as well as important information about the operating system.

TB

Terabyte. A measure of computer storage equal to 1000 gigabytes or trillion bytes. The prefix tera means 10^{12} .

TCP

Transmission Control Protocol. The main protocol used on the internet that allows computers to send and receive data.

TCP/IP

Transmission Control Protocol/Internet Protocol

Terms of Service

The rules you agree to abide by when you sign up use an online service.

Text Message

A brief message that is sent from one phone number to another phone number via a protocol called SMS. Text messages are generally limited to 160 characters, and messages with more characters than that will be broken down into multiple messages when sent. Text messages are asynchronous: a message sent to someone whose phone is off is delivered when their phone is turned back on. Text messages generally do not require cellular data but do require a cellular connection.

Thumb Drive

[USB Flash Drive](#)

Thunderbolt

Interface reconfigured to be compatible with USB-C that carries data, video (PCIe and DisplayPort), sound, and power over a single cable.

TIFF / TIF

Tag Image File Format. Lossless digital image format that was developed originally for scanners as an alternative to multiple proprietary formats.

Timeline

A display of items in chronological order. Twitter has a timeline; Facebook has a news feed.

TL;DR

Too Long, Didn't Read

TOS

Terms of Service

Trojans

A type of malicious computer virus that presents itself as a useful item, such as a document.

Two-Factor Authentication

This is a way to make both your device and your account more secure. When you log into your Apple ID on a new iPad (or iPhone) for the first time OR you log into iCloud from a computer you have never used before, Apple wants you to verify that YOU are the person attempting to access your account.

TXT

[Text message.](#)

Unfollow

To stop seeing a user's posts in your timeline or news feed. On Facebook, you can unfollow someone by still remain friends with them.

Uninstall

The removal of a software program or application from the operating system of a device. Although uninstall removes the visible aspects of a program, there are often bits and pieces of the program left behind.

Unique Identifier

A piece of data that is unique to a record. Telephone numbers and email addresses are often used as unique identifiers, because no two individuals have the same ones. Unique identifiers allow data records to be linked across databases.

Upload

To move files from your computer to a cloud service or network.

URL

Uniform Resource Locator is the address of a space on the web. Every website has a unique address, and that address can often tell you something about the web page you are visiting.

URL Bar

See [address bar](#).

USB

Universal Serial Bus. This is the industry standard for cables that connect devices and their peripherals through a wire. This connection can be used for both communication and power. There are several types of USB connections: USB-A, USB-A 3.0, mini-USB, micro-USB, and the newest standard, USB-C.

USB Flash Drive

Also: USB thumb drive. A small USB data storage device that is removable, rewritable, and can be easily carried in a pocket.

User Data

Any type of data generated by people interacting with software programs. User data includes: Explicit Data, which is given by a user directly such as name, address, email, and phone number; Implicit Data, which is not provided by the user directly but gleaned through analysis of user interactions, such as pages visited, session duration, or type of device; and finally External Data which has been gathered from third parties with whom an organization has a relationship.

Username

Also called account name, login ID, user ID. The credentials you use to access an electronic resources, such as your computer or a website. Every account on a website or device must be unique to that service, so as to keep account information separate.

VGA

Video Graphics Array. A connector that takes video signal from a computer and takes it to the monitor (or projector).

Virtual Personal Assistant

A software program that preforms tasks or services based upon verbal commands. Some of the most well-known services are Siri and Alexa.

Viruses

A piece of malicious software that inserts itself into another software program that it uses to replicate itself. Ransomware is a software virus.

WAV

Waveform Audio File Format. An audio file standard for uncompressed audio.

Web

Also called the World Wide Web, this is an information space on the Internet that is accessible from devices such as computers, cell phones, and tablets, using a URL as the address.

Web Browser

A software program that allows you to access sites on the Internet, or web.

Web Cookie

See Cookie.

Website

a location connected to the Internet that maintains one or more pages on the World Wide Web

Wi-Fi

Short for wireless (the “fi” is an arbitrary syllable added on)

Widget

A graphical element that displays information or provides quick access to certain parts of an app. Mobile devices frequently have a weather widget that is linked to your weather app, and which tells you the current temperature and forecast.

Wireless Access Point

A device that allows your device to access the internet. If a wireless access point (or router) does not have a password, it is unsecure, and you should assume that anyone can see what you are doing on your device.

Wireless Router

A piece of hardware that allows devices to connect to the internet without being plugged into the wall. Your wireless at home should be password protected, so that strangers cannot access all devices in your home using that wireless network.

Wireless

A technology that allows computers to connect to a network and/or the internet without using a physical connection. Wireless is available in an area when a wireless access point (also called a hotspot) has been created and made accessible to devices. Public wireless is less secure and caution should be used (ie, don't make purchases or send private emails over a wireless network). Private wireless networks (such as in your home) should be secured with a password.

WWW

World Wide Web. An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

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