

WINDROID ACADEMY

ICT BY NIMANKA.



FROM COMPONENT TO CONNECTION: THE COMPREHENSIVE PC BUILDING GUIDE.

MASTER THE ART OF BUILDING & TROUBLESHOOTING YOUR PC.

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Module 1: The Fundamentals of Hardware.

Computer hardware refers to the **physical**, tangible parts of a computer system. While software dictates what a computer does, hardware represents what a **computer is**. If you can physically touch it, drop it, or plug it in, it is hardware.

Understanding how these physical pieces work together is the first step to mastering computer maintenance.

Hardware is generally divided into two main categories:

Internal Components (parts inside the computer case that process, store, and manage data) and

Peripherals (External Devices that connect to the outside of the computer to provide input or output).

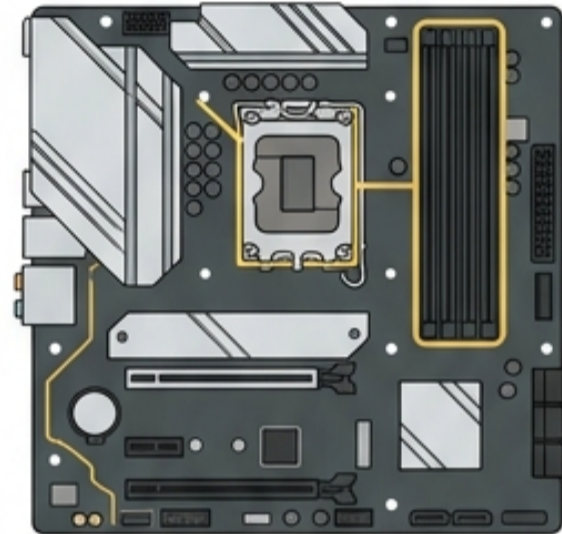


Inside the Case: Processing and Memory

Every computer, whether it's a massive desktop or a slim laptop, relies on a specific ecosystem of parts communicating via the motherboard.

Motherboard (Mobo): The central nervous system.

It is the main printed circuit board (PCB) that connects all other components. It dictates what processors and RAM you can use and houses the chipset, which manages data flow.



Central Processing Unit (CPU): The “brain” of the computer.

It fetches, decodes, and executes instructions. CPUs are judged by their clock speed (measured in GHz) and core count (how many physical processors are on the chip).

Random Access Memory (RAM): The short-term workspace.

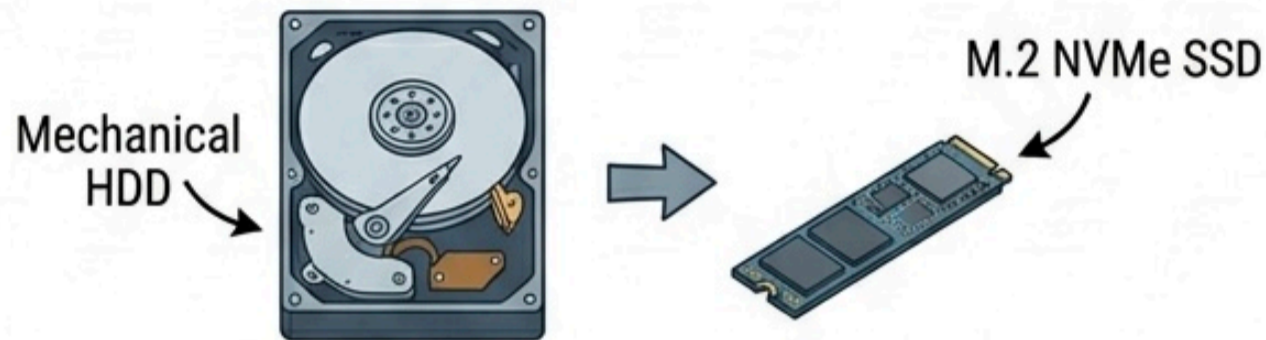
It temporarily stores data that the CPU needs immediately. When you open a program, it loads from your storage into the RAM. If you run out of RAM, your computer slows down as it relies on slower hard drives to swap data.





Inside the Case: Storage and Graphics

Storage Devices (Long-term Memory) : Where your operating system, programs, and files live permanently.



Hard Disk Drives (HDD): Older technology using spinning magnetic platters. They are cheap and offer massive storage but are physically slow.

Solid State Drives (SSD): Modern storage using flash memory chips. They are significantly faster, more durable (no moving parts), and use less power.

NVMe M.2 SSDs: The newest type of SSD that plugs directly into the motherboard like a stick of gum, offering the fastest data transfer speeds available.

Graphics Processing Unit (GPU / Video Card) : A dedicated processor for rendering images, video, and 3D graphics.

While CPUs are good at doing a few complex tasks very fast, GPUs are designed to do thousands of simple task, GPUs are designed to do thousands of simple tasks simultaneously (like calculating the pixels on your screen).

Note: Many CPUs have 'Integrated Graphics' built-in, which is fine for office work, but gaming, 3D rendering, and video editing require a dedicated GPU.



Keeping It Running: Power and Thermal Management

Hardware generates heat and requires specific voltages to operate safely.

- **Power Supply Unit (PSU):** The heart of the system. It converts alternating current (AC) from your wall socket into stable direct current (DC) for the computer. PSUs are rated by wattage (e.g., 500W, 850W) and efficiency ratings.
- **Cooling Systems:**
 - **Air Cooling:** Uses metal heatsinks and fans to pull heat away from components like the CPU and GPU.
 - **Liquid (AIO) Cooling:** Uses a closed loop of liquid, tubes, a pump, and a radiator to dissipate heat. It is generally quieter and more efficient than air cooling.
- **Thermal Paste:** A conductive compound applied between the CPU and the cooler to eliminate microscopic air gaps and transfer heat efficiently.
- **The Computer Case (Chassis) & Form Factors:** Cases dictate the size of the motherboard you can use and how air flows through the system.
 - **ATX:** Standard full-size tower.
 - **Micro-ATX (mATX):** A compact mid-tower.
 - **Mini-ITX:** An ultra-small form factor for portable or discrete desktop builds.

Module 2: Connecting with the Computer

Input Devices (Sending Data IN)

Peripherals are how humans interact with the digital world inside the case.

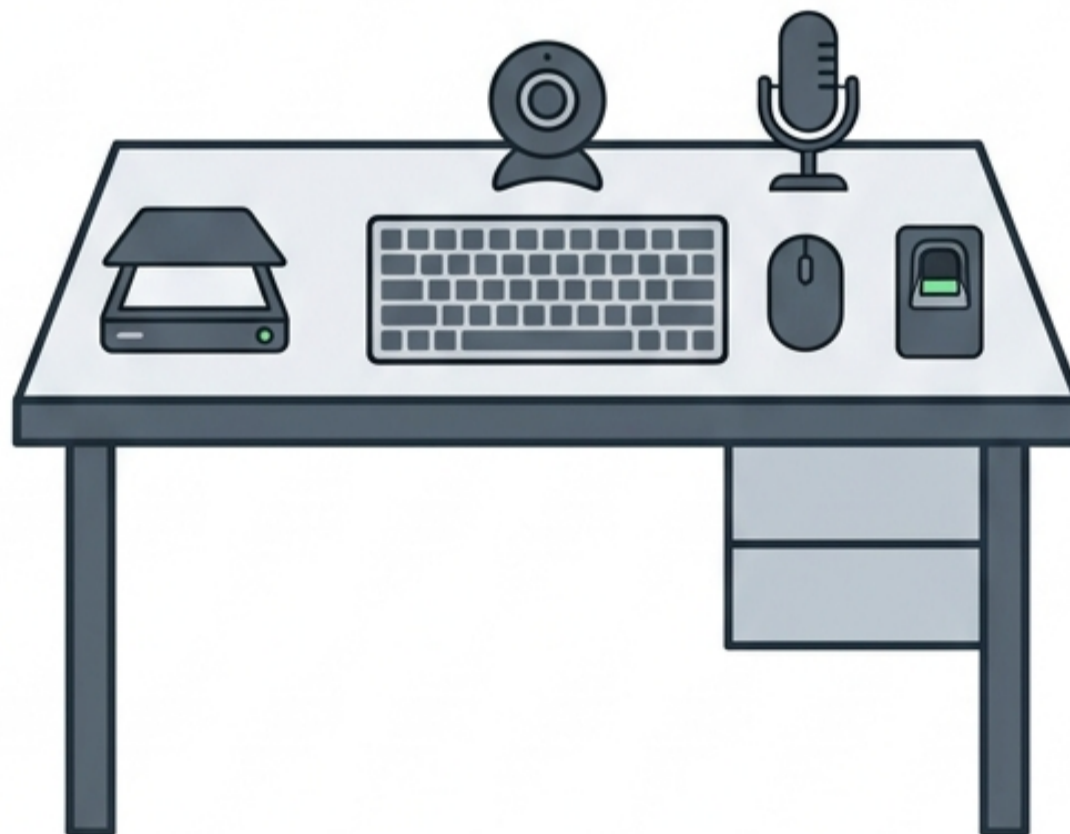
Keyboard: Uses membrane domes or mechanical switches to send keystrokes to the system.

Mouse / Touchpad: Translates physical motion into digital cursor movement using optical lasers.

Webcam & Microphone: Captures optical and audio data to digitize for communication or recording.

Scanners: Converts physical documents and photos into digital image files.

Biometric Devices: Fingerprint readers and facial recognition cameras used for security authentication.

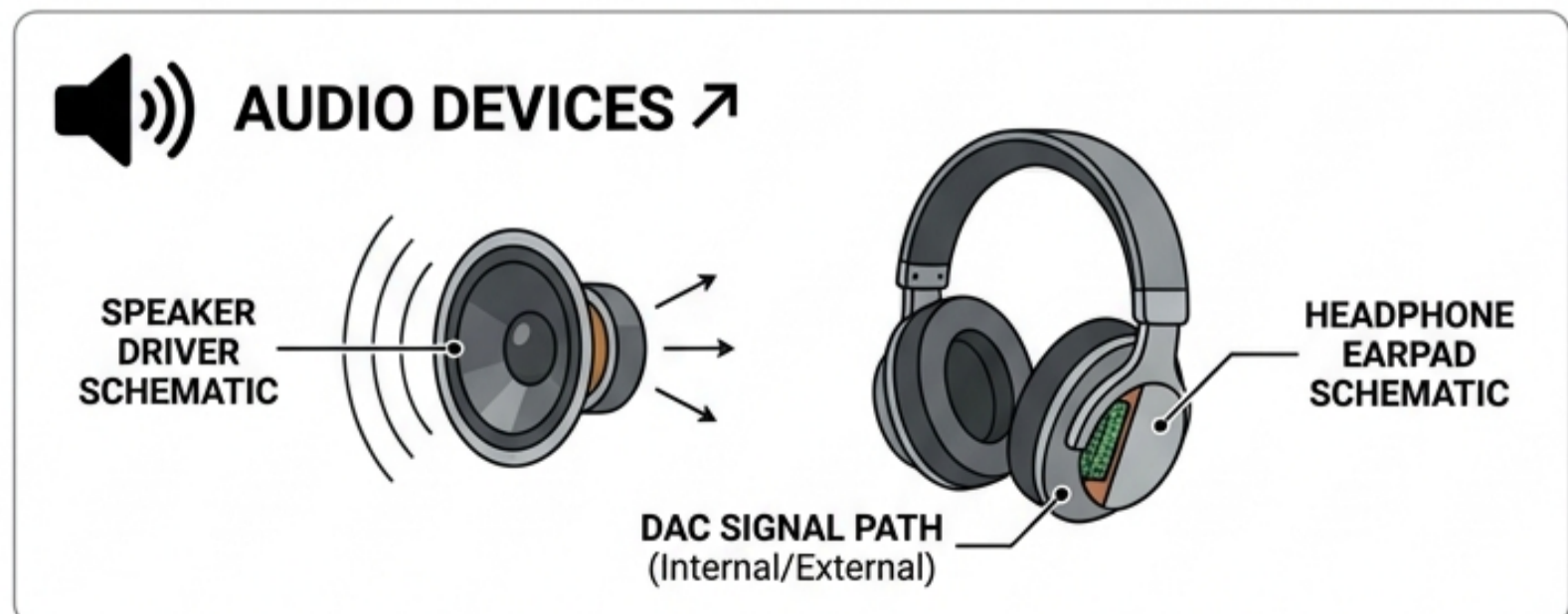
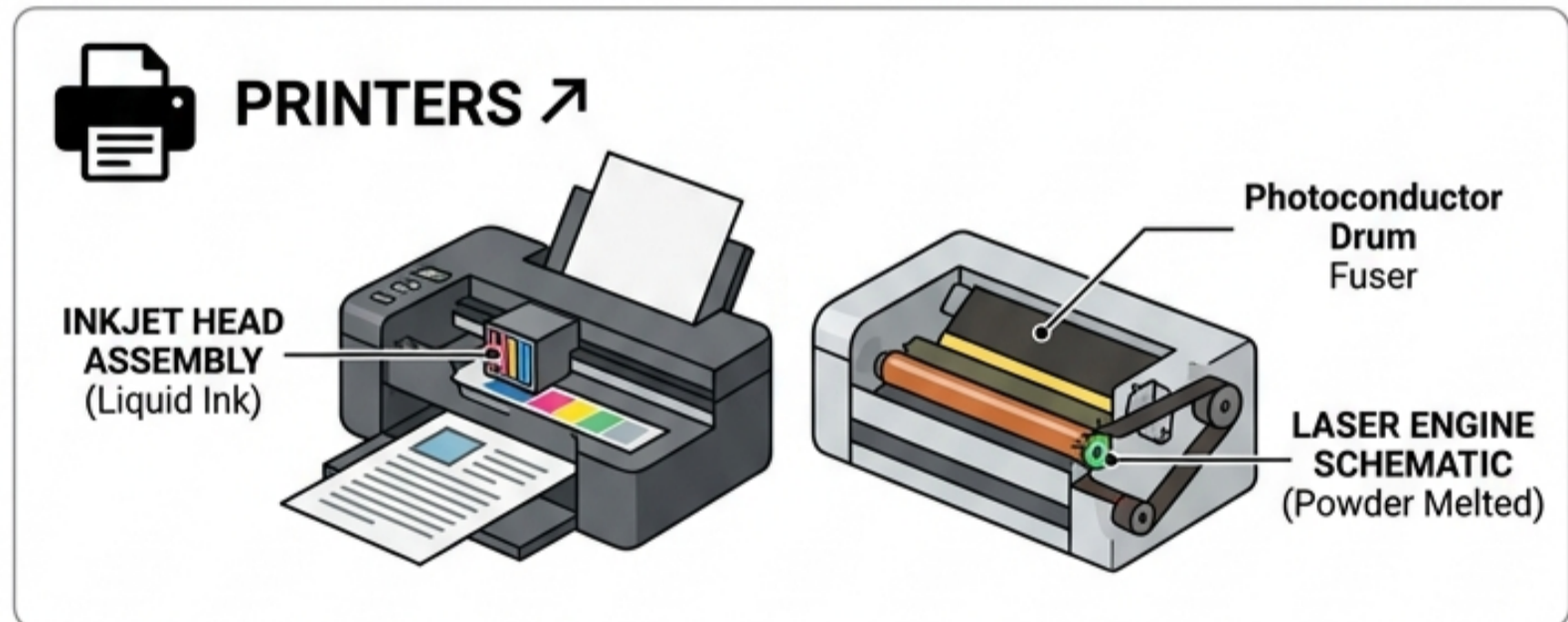
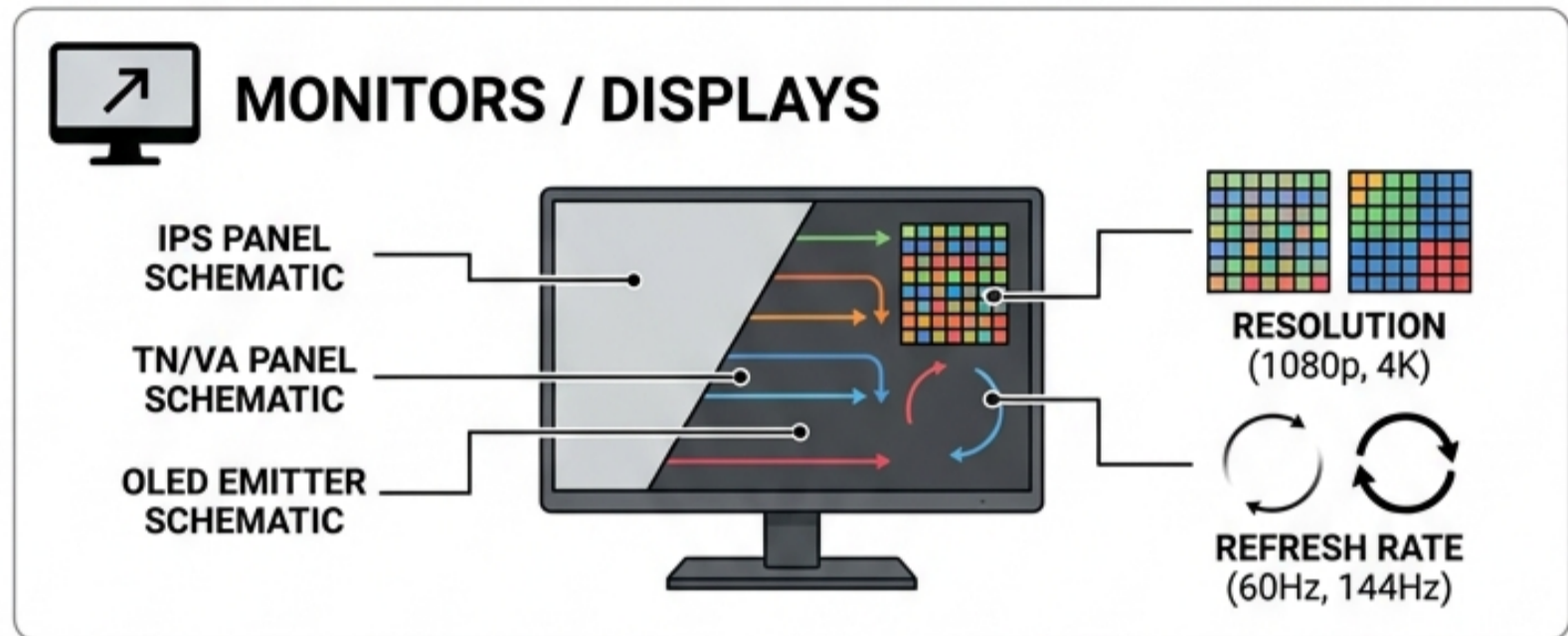


Output Devices (Receiving Data OUT)

Monitors / Displays: The primary visual output. They vary by panel type (IPS for color accuracy, TN/VA for gaming speed, OLED for perfect blacks), resolution (1080p, 4K), and refresh rate (60Hz, 144Hz).

Printers: Translates digital documents into physical copies using inkjets (liquid ink) or laser toner (powder melted onto paper).

Audio Devices: Speakers and headphones convert digital audio signals into physical sound waves via an internal or external Digital-to-Analog Converter (DAC).



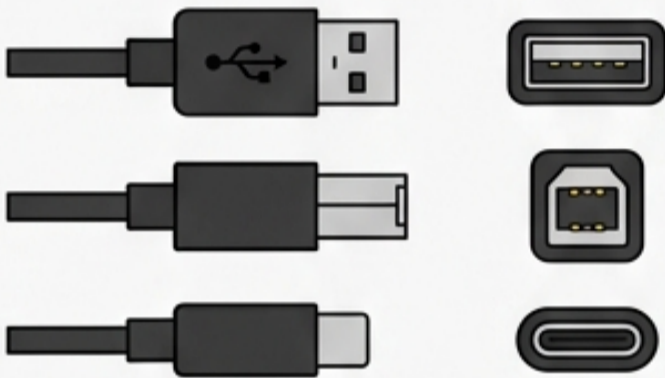
Understanding Ports and Connections

Knowing where to plug things in is crucial for hardware setup.



USB (Universal Serial Bus)

The standard for peripherals. Comes in **USB-A** (rectangular), **USB-B** (square, often for printers), and **USB-C** (small, reversible, and capable of carrying data, video, and high-wattage power).



Video Ports: HDMI

Carries high-definition video and audio. Common on TVs and monitors.



DisplayPort (DP)

Similar to HDMI but typically supports higher refresh rates and resolutions, favored by PC gamers and professionals.



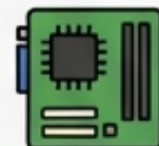
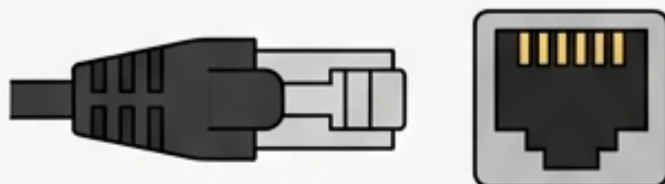
Audio Jacks

Standard 3.5mm analog connections. Green is usually for headphones/speakers, and pink is for microphones.



Ethernet (RJ45)

Connects the PC directly to a router or network switch for stable, high-speed wired internet.






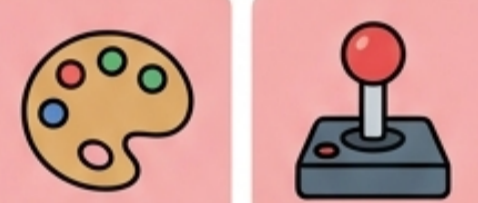

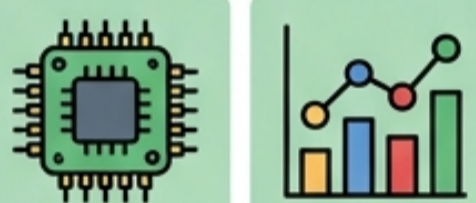
Internal Data Cables

SATA cables connect the motherboard to older HDDs and 2.5-inch SSDs.



Module 3: Building Your PC

Building a PC starts with choosing components that fit your specific needs and budget. Not everyone needs a supercomputer.

Scenario 1: The Student & Office Worker	Scenario 2: The Gamer & Creative Professional	Scenario 3: The IT Professional, Developer & Data
 	 	 
<p>Scenario 1: The Student & Office Worker: Best for: Writing papers, web browsing, attending virtual classes, and basic office applications.</p> <p>CPU: Entry-level to mid-range (e.g., Intel Core i3/i5 or AMD Ryzen 3/5).</p> <p>RAM: 8GB to 16GB.</p> <p>Storage: 500GB to 1TB NVMe SSD.</p> <p>GPU: Integrated graphics (built into the CPU) are completely sufficient.</p>	<p>Scenario 2: The Gamer & Creative Professional: Best for: Video editing, 3D rendering, graphic design, and high-framerate gaming.</p> <p>CPU: High-performance multi-core processors (e.g., Intel Core i7/i9 or AMD Ryzen 7/9).</p> <p>RAM: 32GB to 64GB.</p> <p>Storage: 1TB or 2TB Gen 4 NVMe SSD paired with a large, cheaper HDD (4TB+) for archiving.</p> <p>GPU: A powerful dedicated graphics card (see the next page for details).</p>	<p>Scenario 3: The IT Professional, Developer & Data Scientist: Best for: Writing code, running virtual machines (VMs), compiling software, and data analysis.</p> <p>CPU: Top-tier processors with high core and thread counts.</p> <p>RAM: 64GB or more.</p> <p>Motherboard: High-end board with excellent power delivery and multiple expansion slots.</p> <p>GPU: Mid-range for coding, or top-tier with high VRAM for Machine Learning and AI.</p>

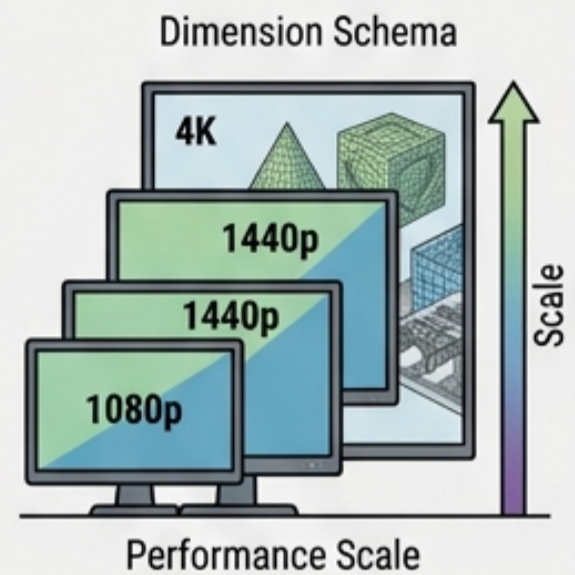
How to Choose a Graphics Card (GPU)

The Graphics Card is often the most expensive part of a high-performance build. Choosing the right one requires balancing your budget with your display and workflow needs.



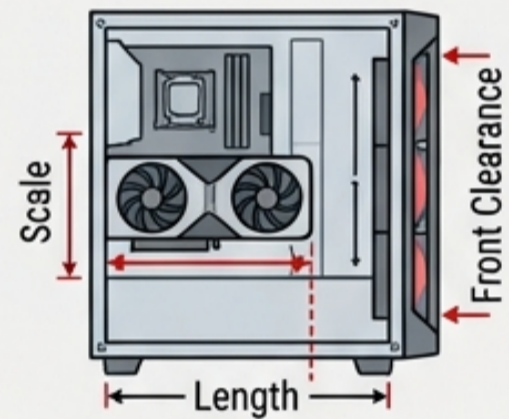
1. Identify Your Use Case and Resolution:

- **1080p Gaming / Basic Video Editing:** You don't need to overspend. Entry-level to mid-range cards (e.g., NVIDIA RTX 4060, AMD Radeon RX 7600) will easily run games smoothly and handle standard 1080p video rendering.
- **1440p Gaming / 4K Video Editing:** You need a higher-tier card with more Video RAM (VRAM), typically 12GB or more (e.g., RTX 4070, RX 7800 XT).
- **4K Gaming / Heavy 3D Rendering:** You will need enthusiast-tier flagship cards (e.g., RTX 4080/4090, RX 7900X) to process millions of pixels at high speeds.



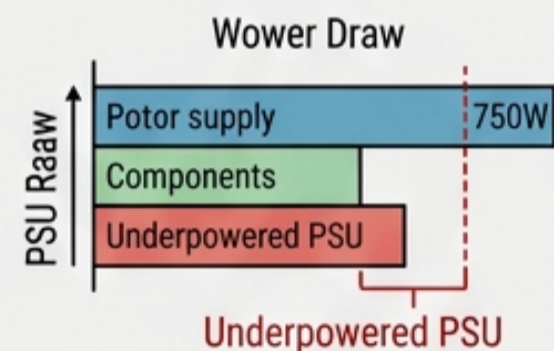
2. Physical Size & Case Clearance:

Modern GPUs are massive. Before buying, check the **GPU length measurement** on the manufacturer's website and compare it to the **maximum GPU clearance** listed in your computer case's manual. If the card is too long, it will hit your front intake fans and simply won't fit.



3. Power Supply (PSU) Requirements:

A powerful GPU draws a lot of electricity. Check the GPU's "**Recommended PSU Wattage**" (e.g., 750W). If your current power supply is only 500W, your system will shut down under heavy load, meaning you must buy a new power supply along with the GPU.



4. NVIDIA vs. AMD vs. Intel:



NVIDIA: Generally dominates the high-end market. Best for professional productivity (video editing, 3D rendering, AI) and Ray Tracing in games.



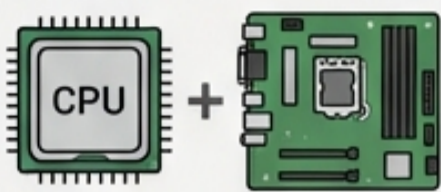
AMD: Often provides better raw performance for the price in standard gaming. Excellent value if you don't need heavy professional productivity features.



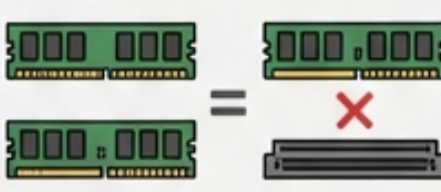
Intel: A newer competitor in the GPU space (Intel ARC). Good for budget-conscious builders and excels at video encoding, but drivers are still maturing.

The Golden Rule of PC Building: Compatibility


Before buying anything, use online tools like PCPartPicker.com to **automatically** check for incompatibilities.



Socket Matching: The CPU must match the motherboard socket physically.



RAM Generation: Motherboards only support one generation of RAM (e.g., DDR4 or DDR5).



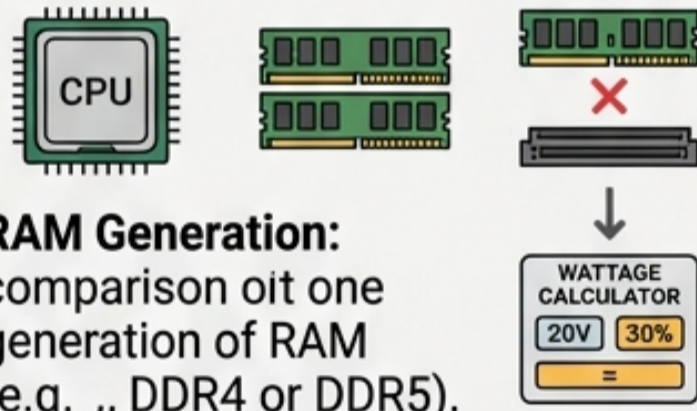
Power Supply (PSU) Headroom: Calculate the total wattage of all your parts and buy a PSU with at least **20% to 30% more capacity**.

Preparing for Assembly


Building a PC is like assembling expensive “Lego” blocks.



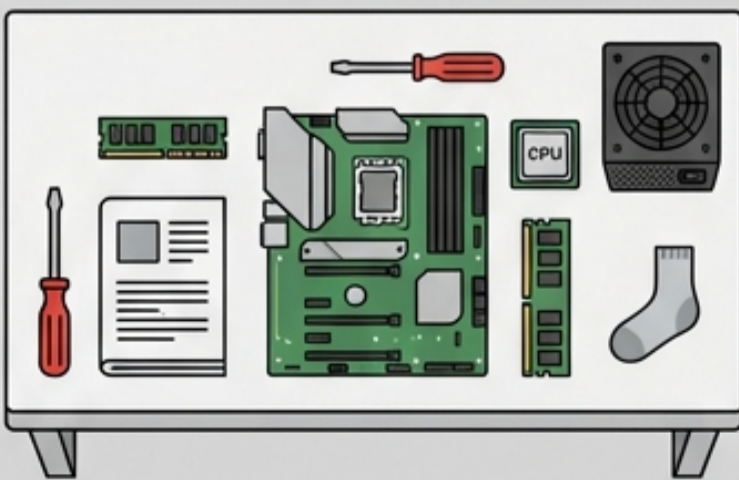
Tools: A #2 magnetic Phillips-head screwdriver, a clean, flat, non-carpeted surface, and your motherboard manual.



RAM Generation: comparison of one generation of RAM (e.g., DDR4 or DDR5).



Anti-Static Precautions: Static electricity from your body can damage sensitive microchips. Ground yourself by touching a large metal object, or wear an anti-static wristband. Avoid wearing socks on carpet.



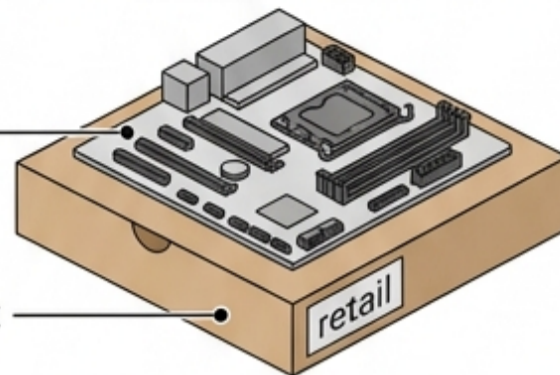
Step 1: Motherboard Out-of-Case Assembly

It is easier to install the core components before putting the motherboard inside the cramped case.

1 Place Motherboard

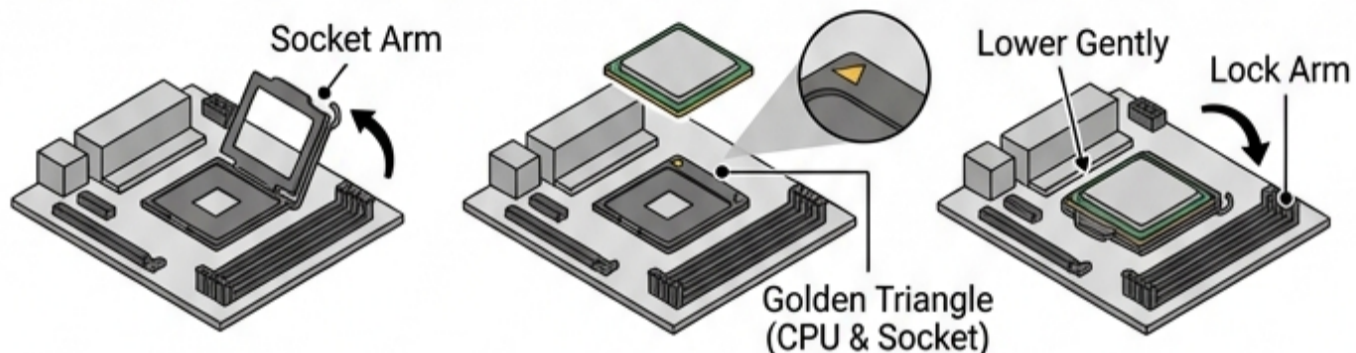
Place the motherboard on top of its cardboard box.

Retail cardboard box



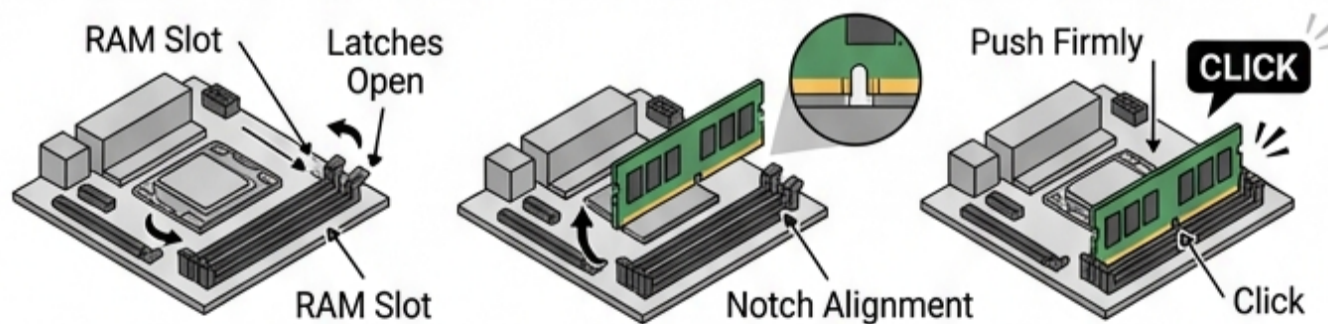
2 Install the CPU

Unlatch the socket arm. Line up the golden triangle on the CPU with the triangle on the socket. Drop it in gently—never push. Lock the arm down.



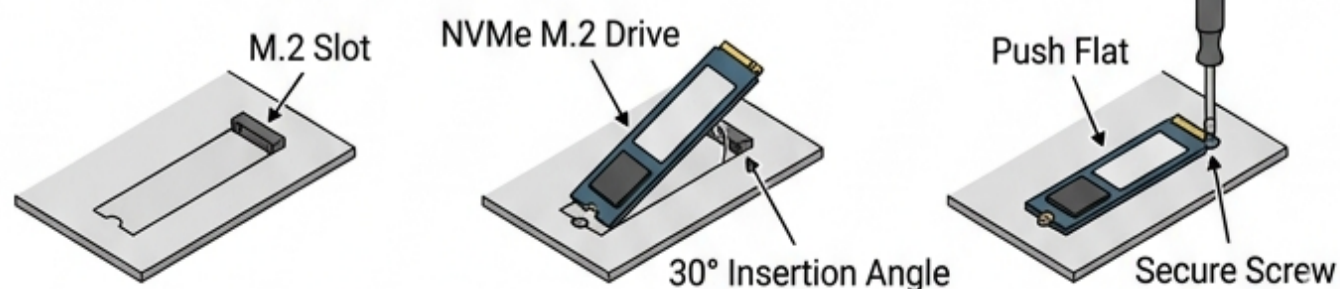
3 Install the RAM

Open the latches on the ends of the slots. Line up the notch on the RAM stick with the slot, and push down firmly until it clicks.



4 Install the NVMe SSD

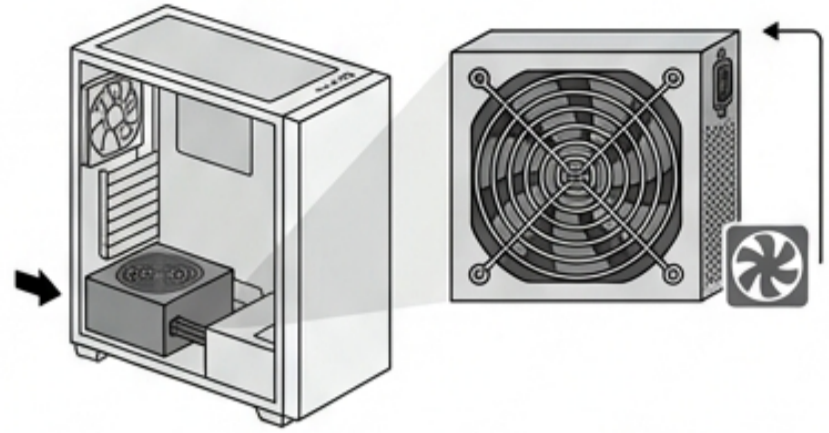
Insert the M.2 drive at a 30-degree angle, push it flat, and secure it with the tiny motherboard screw.



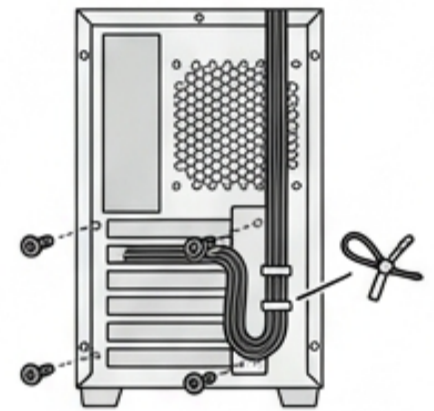
Page 13: Step-by-Step Assembly (Continued)

Step 4: Install the Power Supply (PSU)

1. Slide the PSU into its designated shroud at the bottom or top of the case. Ensure the PSU fan is facing a ventilation grate.

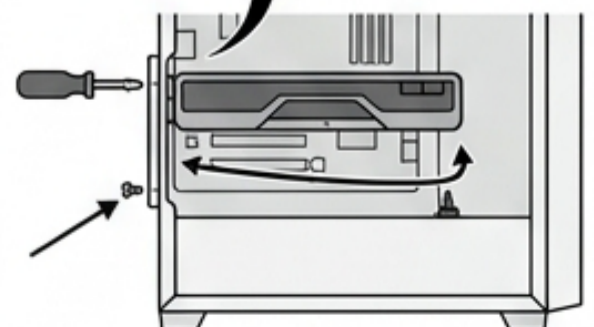
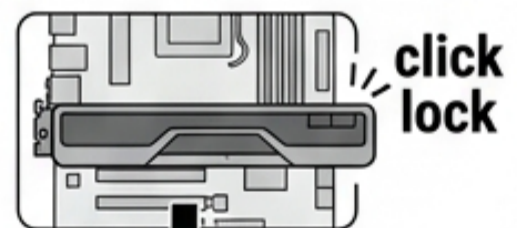
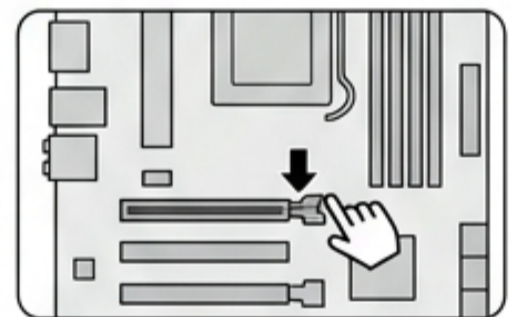


2. Secure it to the back of the case with four screws. Route cables to the back for management.



Step 5: Install the Graphics Card (GPU)

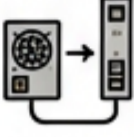
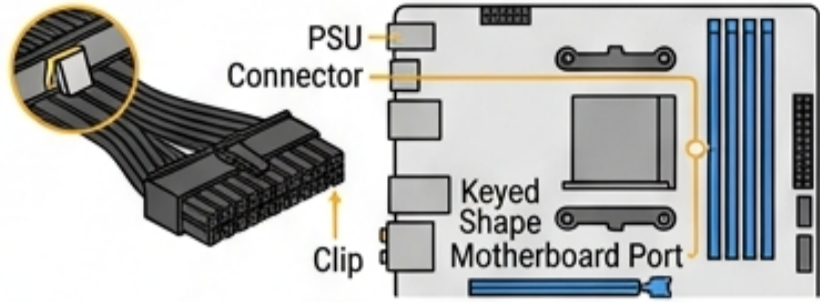
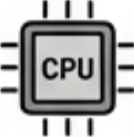
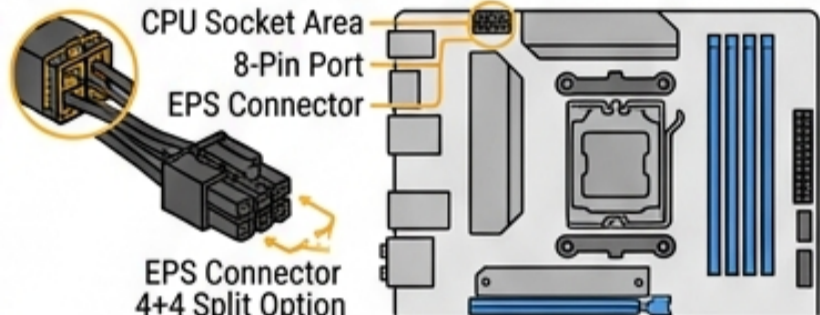
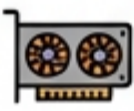
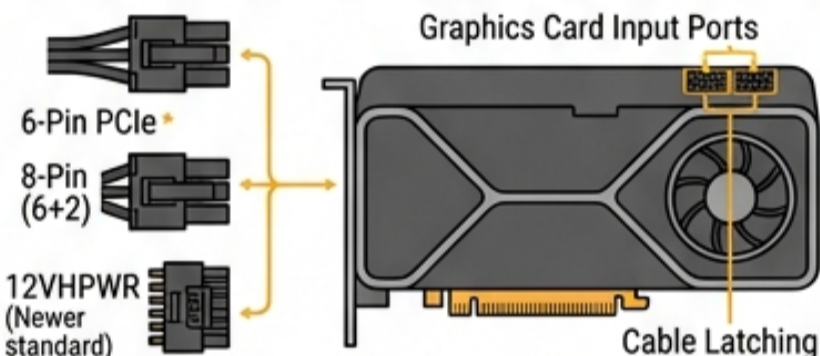

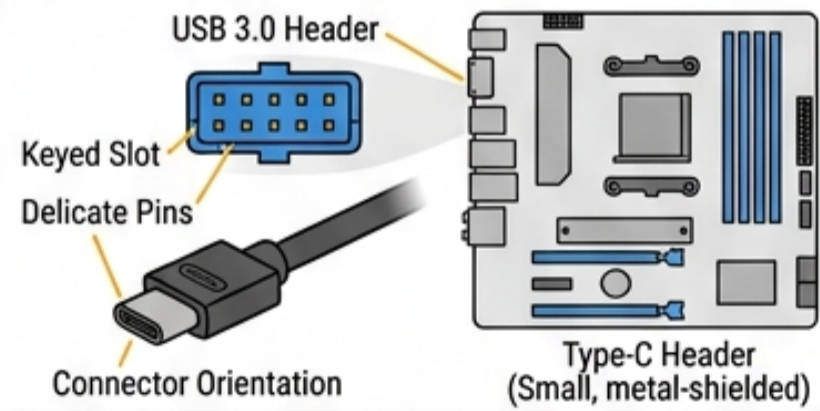

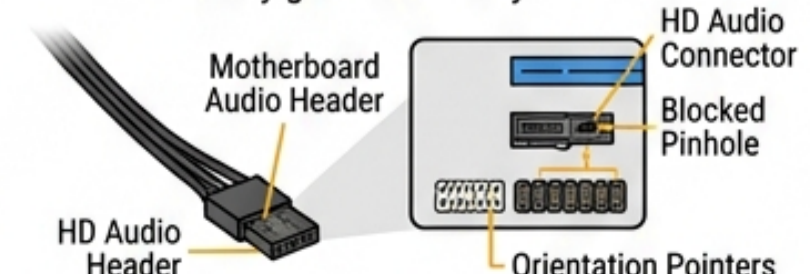

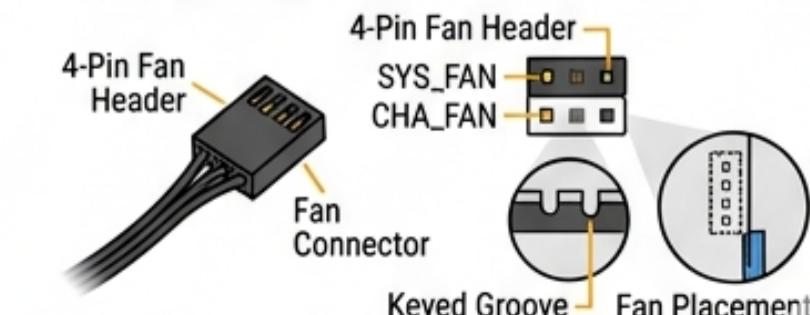
1. Remove the PCIe expansion slot covers on the back of the case.
2. Push down the plastic locking tab on the motherboard's top PCIe slot.
3. Align the GPU and push it straight down until the tab clicks locked.
4. Secure the metal bracket of the GPU to the case with screws to prevent sagging.



[Page 14: Wiring and Pins Guide]

Plugging in the Necessary Pins and Cables

Connecting the cables is often the most intimidating part of a build, but every connector is keyed (shaped a specific way) so it only fits where it belongs. Refer to your motherboard manual for precise locations.

1. The Main Power Cables (From the PSU)	
 <p>24-Pin ATX Power: This is the thickest cable. It plugs into the long port on the right side of the motherboard. Push firmly until the clip latches; this provides the main power to the board.</p>	
 <p>8-Pin EPS (CPU Power): This cable typically splits into 4+4 pins. It plugs into the top-left corner of the motherboard to power the processor. Do not confuse this with the PCIe cable.</p>	
 <p>PCIe Power Cables (GPU Power): These plug into the top or side of your Graphics Card. Depending on your GPU, it may require one 6-pin, multiple 8-pins, or a newer 12VHPWR cable. Ensure they click securely into the GPU to prevent power melting issues.</p>	
2. The Case Connectors (From the System Unit)	
 <p>USB 3.0 / Type-C Headers: The thick cable with a blue tip (USB 3.0) plugs into the right side of the board. Be careful not to bend the delicate pins. If your case has a front USB-C port, look for the smaller, metal-shielded header nearby.</p>	
 <p>HD Audio Header: A small cable that powers your case's front headphone and mic jacks. It usually plugs into the bottom-left corner of the motherboard. It has one blocked pinhole so it only goes in one way.</p>	
 <p>Fan Headers: Plug your case fans into any available 4-pin headers labeled SYS_FAN or CHA_FAN around the edges of the motherboard.</p>	

Front Panel Connectors

3. The Front Panel Header (F_PANEL)

This is notorious for being the trickiest part of building a PC. These tiny individual pins connect your case's power button and LED lights to the bottom-right corner of the motherboard.

They are usually labeled as follows:



POWER SW: Connects the power button. (Orientation/positive-negative does not matter).



RESET SW: Connects the reset button. (Orientation does not matter).



POWER LED + and -: Powers the light around your power button. (Orientation does matter; positive must go to the positive pin).



HDD LED + and -: The light that blinks when your storage drive is reading/writing. (Orientation does matter).



Pro Tip: Consult the diagram in your motherboard manual to see exactly which row and column each of these tiny wires plugs into. A pair of tweezers or needle-nose pliers can help if your fingers are too large.

Bottom Panel: First Boot

Step 7: The First Boot & BIOS



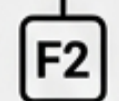
Plug your monitor directly into the Graphics Card (not the motherboard).



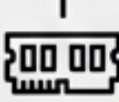
Plug the PSU into the wall, flip the switch to "I", and press the case power button.



If fans spin and a logo appears, your PC has successfully POSTed!







Press Delete or F2 to enter the BIOS.

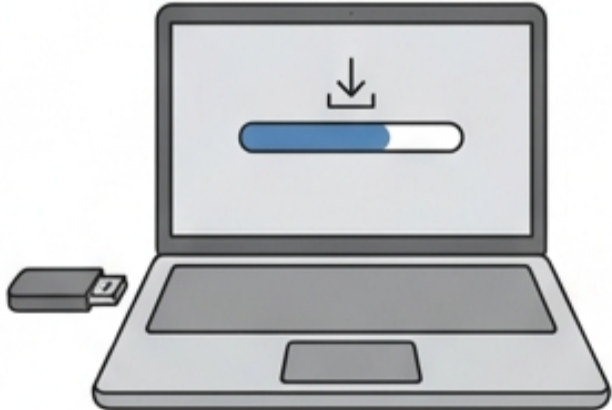


Check that your RAM and drives are recognized, and enable XMP/DOCP for full RAM speed.

Module 4: Installing Windows.

Hardware is useless without an Operating System (OS). Installing Windows from scratch (a "clean install") is necessary for a new build.

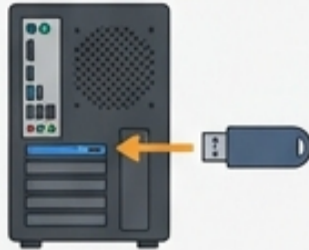
What You Will Need:	
	A Working Computer: To download the files.
	A USB Flash Drive: At least 8GB of space.
	 Warning: Everything on it will be permanently erased.
	A Windows License Key: A 25-character code (optional during setup, can activate later).

Step 1: Create the Windows Installation Media:	
On your working computer, plug in your empty USB drive.	
Go to the official Microsoft website and search for "Download Windows 11" (or 10).	
Download the "Media Creation Tool."	
Open the tool, accept the terms, and select "Create installation media (USB flash drive) for another PC."	
Select your language and edition, then choose your USB drive.	
The tool will download Windows and format the drive.	

Page 17: OS Installation Process

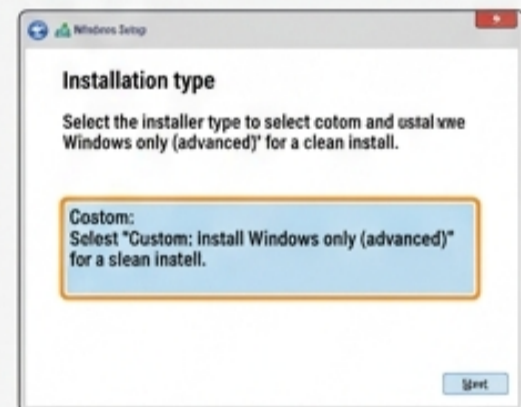
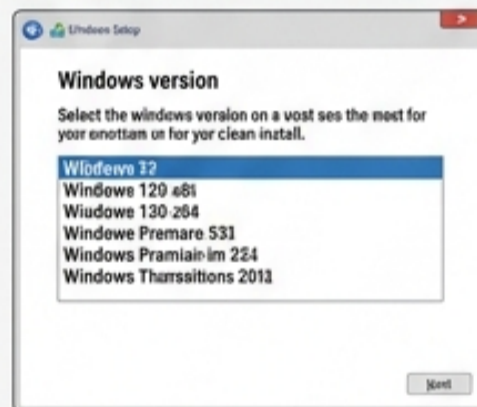
1 Step 2: Booting from the USB Drive:

- Plug the Windows USB drive into the back of your new motherboard.
- Turn the computer on.
- Rapidly tap the **Boot Menu Key** (usually F8, F11, F12, or Esc).
- Select your USB flash drive from the list and hit **Enter**.



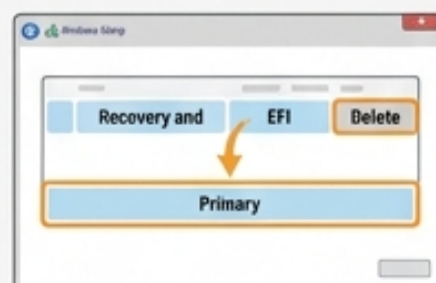
3 Step 3: Navigating Windows Setup:

- **Language & Time:** Select preferences, then click "Next" and "Install Now."
- **Product Key:** Type your key, or click "I don't have a product key" at the bottom to skip.
- Select your Windows version.
- **Installation Type:** Select "Custom: Install Windows only (advanced)" for a clean install.



4 Step 4: Drive Formatting and Partitioning:

- **For a brand new drive:** It will say "Drive 0 Unallocated Space." Click it and hit "Next."
- **For an old drive:** Click on each partition for that specific drive and click "Delete" until it merges into a single block of "Unallocated Space." Select it and click "Next." Windows will begin installing.



- Windows will begin installing.



[Page 18: Post-OS Installation]

Step 5: The Out-of-Box Experience (OOBE)

Once Windows finishes copying files, your PC will restart. You can now remove the USB drive.



1. Region & Keyboard

Confirm your location.



2. Network Connection

Connect to Wi-Fi or Ethernet.



3. Account Setup

Sign in with a Microsoft Account, or set up a local offline account.



4. Create a PIN

For quick, secure login.



Privacy Settings

Review the list and toggle off diagnostic tracking or location services if you prefer privacy.

Step 6: Post-Installation Checklist

You are now on the desktop, but you must finish these three tasks: Check off points precisely:



Run Windows Update

Go to Settings > Windows Update and check for updates repeatedly until fully updated.



Install Drivers

Go to your motherboard and GPU manufacturers' websites to download the latest LAN, Audio, Chipset, and Graphics drivers.



Check Display Refresh Rate

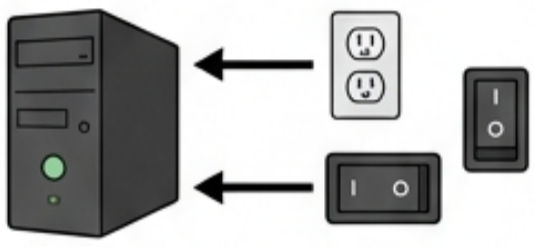
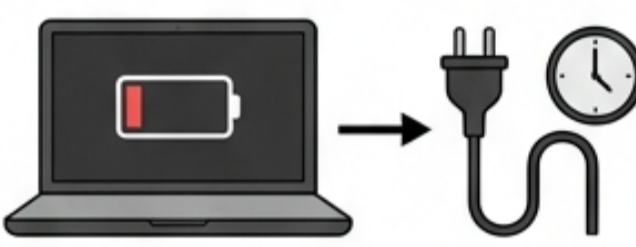
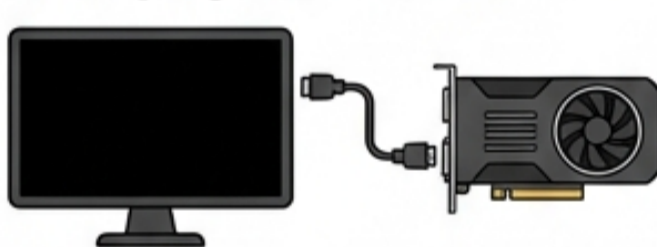
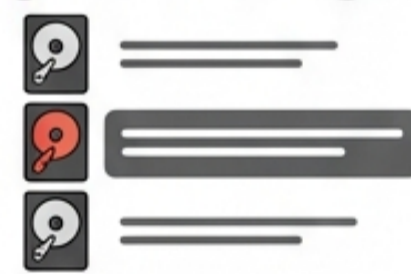
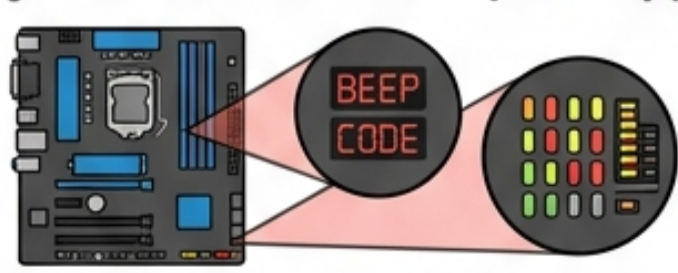

Right-click the desktop > Display settings > Advanced display. Ensure the refresh rate is set to your monitor's maximum capability.



Module 5: Hardware & System Troubleshooting Guide

Even the best systems run into issues. Use this quick-reference guide to diagnose and fix common computer problems.

1. Power & Booting Solutions

<ul style="list-style-type: none">• PC will not turn on:  <ul style="list-style-type: none">• Plug the PC directly into a known working wall outlet. Verify the physical switch on the back of the Power Supply Unit (PSU) is flipped to the "ON" position. Ensure front-panel case cables are seated correctly on the motherboard.	<ul style="list-style-type: none">• Laptop is completely dead:  <ul style="list-style-type: none">• Perform a hard reset. Unplug the charger, remove the battery (if possible), hold the power button down for 60 seconds, then reconnect and turn it on.
<ul style="list-style-type: none">• No display on monitor:  <ul style="list-style-type: none">• Verify the monitor has power. Ensure the video cable is plugged directly into the dedicated graphics card (not the motherboard's video port) and the correct monitor input is selected.	<ul style="list-style-type: none">• Booting to the wrong drive:  <ul style="list-style-type: none">• Disconnect external USB drives, enter the BIOS/UEFI settings during startup, and set your primary internal hard drive as the highest boot priority.
<ul style="list-style-type: none">• System fails to POST (startup):  <ul style="list-style-type: none">• Note the startup beep code sequence or diagnostic LED lights and search online with your motherboard brand to identify failing hardware (usually RAM or GPU).	<ul style="list-style-type: none">• System time keeps resetting:  <ul style="list-style-type: none">• Force a manual time sync in Windows settings or physically replace the round CR2032 CMOS battery on the motherboard.

2. Performance & System Solutions



Sluggish performance: Open Task Manager (Ctrl + Shift + Esc) to force-close resource-heavy background apps and disable unnecessary startup programs.



Random restarts/shutdowns: Monitor CPU/GPU temperatures. Clean internal dust with compressed air, and ensure case/CPU fans are spinning to prevent thermal throttling.



Frozen graphics/screen: Press Win + Ctrl + Shift + B to restart frozen graphics drivers, or hold the physical power button for 10 seconds to force a hard shutdown.



Blue Screen of Death (BSOD): Note the BSOD stop code, boot into Safe Mode, and update your drivers, or run the Windows Memory Diagnostic tool to check for dying RAM.



Loud mechanical noises: Clean intake/exhaust vents and fan blades with compressed air. Replace case fans if they are making a grinding/clicking noise.



Poor laptop battery life: Switch to "Battery saver" mode, lower screen brightness, disable Bluetooth, and close heavy browser tabs.



Stuck Windows updates: Run the Windows Update Troubleshooter (Settings > System > Troubleshoot > Other troubleshooters).

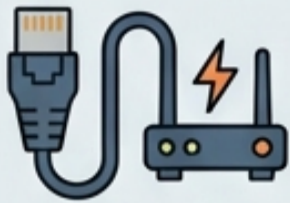


Unresponsive taskbar/search: Restart the "Windows Explorer" process in Task Manager to refresh the interface.

[Page 21: Troubleshooting - Connectivity & Input]

3. Internet & Connectivity Solutions

After setting up Windows, ensuring a stable connection is vital. If you encounter issues, try these common solutions before assuming a hardware failure.



Check Physical Connections:

Ensure all cables (Ethernet, modem, router power) are securely plugged in on both ends.



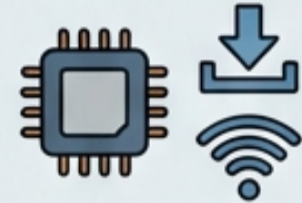
Power Cycle Modem & Router:

Unplug both devices from the wall, wait 30 seconds, then plug them back in, allowing them to fully restart.



Run Windows Troubleshooter:

Right-click the network icon in the taskbar and select "Troubleshoot problems" for an automated diagnostic.



Update/Reinstall Drivers:

Download the latest LAN and Wi-Fi drivers from the motherboard manufacturer's website on a working computer and transfer them.

4. Keyboard & Mouse Solutions

Unresponsive input devices can stop a build in its tracks. Address both wired and wireless problems systematically.



Check Connection & Port:

For wired, try a direct USB port on the motherboard's rear. For wireless, re-plug the receiver dongle.



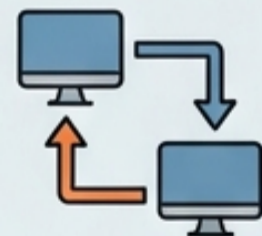
Replace/Charge Power:

If wireless, low batteries cause lag. For rechargeables, it is fully powered.



Reinstall Input Driver:

In Device Manager, right-click your keyboard or mouse, choose "Uninstall," then restart the PC to let Windows reinstall.



Test on Another PC:

Connect your device to a different computer to determine if the issue is with the device itself or your system.

5. Audio & Video Solutions



No Sound? Check Outputs:

Verify the monitor has sound.

Ensure speakers are on and selected as the primary playback device in Sound Settings.

Unmute your device and confirm a Sound device.



Microphone Unresponsive?

Confirm Settings: Open microphone settings.

Grant permissions to apps and test the input volume.

Unmute physical mic switches.



Flickering Display?

Tighten Cables: Power cycle the monitor.

Reseat video cables on both the display and graphics card ends.

Try a different cable.



Video Lag/ Low FPS?

Update Drivers:

Go to your GPU manufacturer's website and download the latest graphics drivers.

Optimize in-game settings.

6. Files & Storage Solutions



Drive Not Detected?

Reseat Connections: Check SATA or M.2 power and data cables. Reseat the drive. Enter BIOS to confirm physical detection.



Storage Slow?

Free Up Space: Use Disk Cleanup to remove temporary files. Uninstall large, unused apps. Keep at least 15-20% free space.



Missing/Corrupted Files?

Run CHKDSK: Run 'chkdsk /f' in Command Prompt as Administrator. Repair filesystem errors. Scan for malware.



Unformatted/ New Drive?

Initialize Disk: Open Disk Management. Initialize new disks. Right-click unallocated space and select 'New Simple Volume' to format.

7. Software & Apps Solutions



App Crashes? Reset Applications:

- Settings > Apps > App > Advanced. Select Reset.
- Check App Store or website for updates.



Slow Software? Force-Close Processes:

- Open Task Manager.
- Find app using CPU/RAM and click End task.
- Limit background apps in Settings.



Stuck App? Clear Temporary Files:

- Use Windows Disk Cleanup.
- Delete Temp files and other cache data.
- Free up drive space (at least 15-20%).



Windows Error? Run SFC Scan:

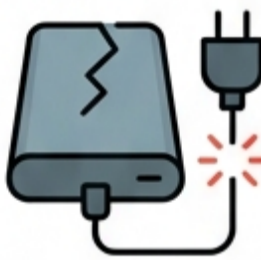
- Open Command Prompt as Administrator.
- Run 'sfc /scannow'.
- Run 'sfc /scannow' to detect and fix system file corruption.

8. Printers & External Drives Solutions



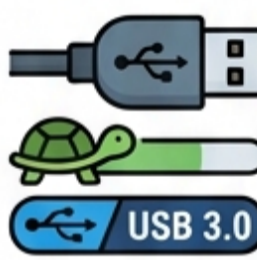
Printer Offline? Clear Print Spooler:

- In Windows Services, stop "Print Spooler".
- Delete files in **C:\Windows\System32\spool\PRINTERS** and restart service.



Drive Not Found? Reseat and Power:

- Unplug and reconnect USB cable. Try different ports.
- Ensure external power (for large drives) is connected.



Slow USB Transfer? Check USB Type:

- Ensure you are using a USB 3.0+ port (blue or red) for high-speed drives.
- Verify cable is high-speed.



Write Protected? Unlock physical switch:

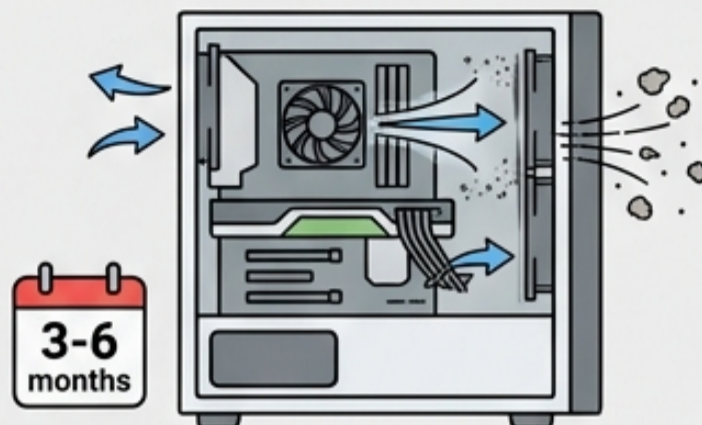
- Inspect external drive for a physical lock switch. Move it trenaout to the unlocked position.
- For other drives, use diskpart "attributes disk clear readonly".

Module 6: Longevity & Best Practices

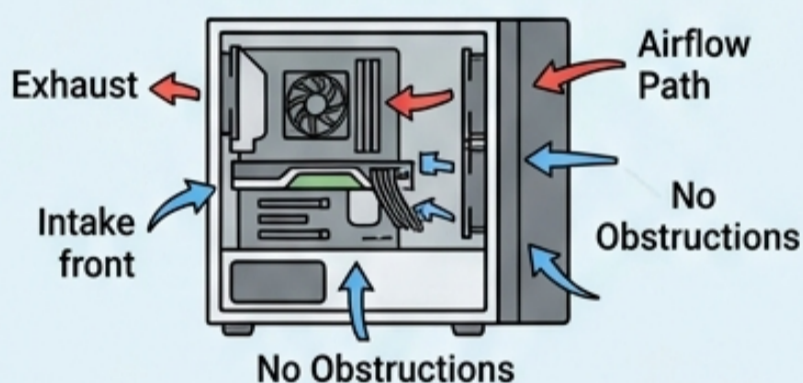
The best troubleshooting is preventative. Keep your system running smoothly by following these **golden rules** for hardware longevity:



Keep it Clean: Dust is the ultimate enemy of hardware. It blankets components, traps heat, and causes fans to overwork. Power down your PC and use compressed air to **clean out the case, heatsinks, and fans every 3 to 6 months.**

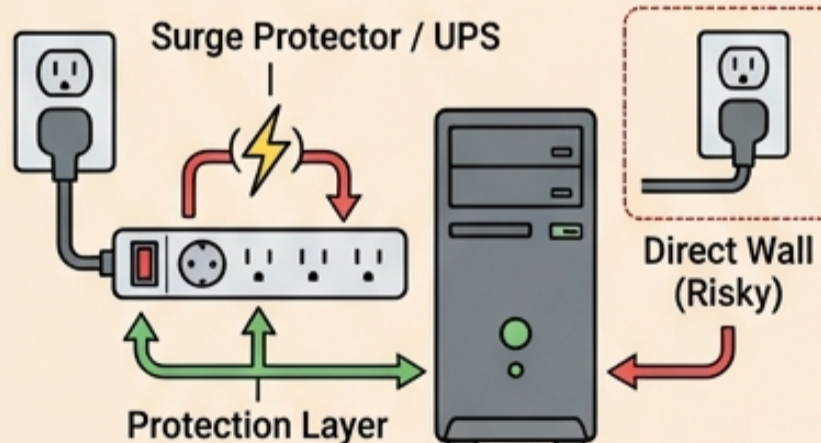


Keep it Cool: Ensure your computer has proper airflow. Don't push desktops flush against a wall or tuck them inside enclosed, unventilated cabinets. For laptops, use them on **hard, flat surfaces—soft blankets block bottom intake vents and cause severe overheating.**



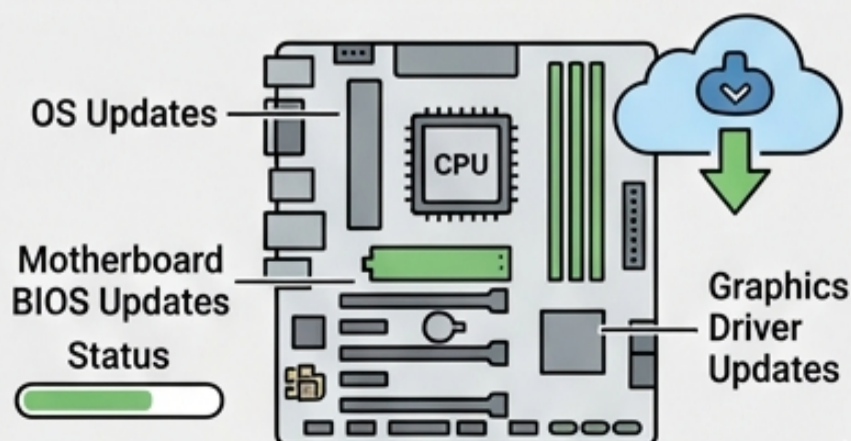
Keep it Safe:

Plug your desktop into a **Surge Protector or an Uninterruptible Power Supply (UPS)**, not directly into the wall. This protects sensitive motherboard components from power spikes, lightning strikes, and sudden outages.



Keep it Updated:

Software directly controls how hardware behaves. Regularly update your operating system, motherboard BIOS, and graphics drivers to ensure compatibility, security, and optimal performance.



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BUILD YOUR FUTURE WITH US.**

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