

# Peripheral Devices

How Stuff Works - Peripherals

# What is a Peripheral Device

Definition: "a device or unit that operates separately from the CPU but is connected to it"

- peripheral devices are often added to the original computer after purchase
- most computers can operate, in some way, with no (or minimal) peripherals
- may be connected internally or externally
- may receive power from the computer, or require separate source of power

# Peripheral Connections

## Internal "Slots" on Computer

- Connected Directly to Motherboard
  - video, sound, and network cards
  - many types of connections over years
  - PCIe, PCI, AGP, IDE



# Peripheral Connections

## Universal Serial Bus (USB)



- generally standard for all external devices
- mouse, keyboard, camera, microphone, external storage

# Peripheral Connections

## High-Definition Multimedia Interface (HDMI)



- primarily used for streaming media (video & sound) from computer to television



# Peripheral Connections

## VGA and DVI



VGA

DVI

- VGA stands for "Video Graphics Array"
  - older, limited resolution
  - still very common
- DVI is "Digital Video Interface"
  - newer, same as HDMI without sound

# Essential Peripherals

- Keyboard
  - some computers will not even boot without a keyboard attached
  - specialized systems may be designed to operate without a keyboard
- Mouse
  - generally required for all 'modern' computers (last 20+ years)
  - replaced by touchpad or touchscreen on some computers

# Enhancement Peripherals

- Video Card

- most computers have video hardware built into the motherboard
- a more powerful video card may be added
- provides greatly increased performance
- ability to operate multiple monitors



- Sound Card

- generally provided on the motherboard
- only most advanced uses require specialized card (music creation, home theatre)



# Productivity Peripherals

separate devices with own microprocessor, DRAM, and power supply

- Printer
  - personal printers connected via USB or wireless network
  - professional printers connected via network
- Scanner
  - scans images and documents into computer
  - connected via USB



# Social Peripherals

- Camera
  - generally USB connection
  - limited resolution and framerate (speed) due to limitations of USB connection
  - quality consistently improving
- Microphone
  - older models plugged into sound card
  - now incorporated into camera (e.g., web cam) and connected via USB



# Obsolete Peripherals

- Network Card

- network connectors have only been a common feature since 2000
- older computers required a card to be plugged directly into the motherboard



- Fax Modem

- data connection connected directly to phone line
- replaced by fast network connections

