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Peripherals

Computer Systems



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NUEVO DESGLOSE IES CAMPANILLAS

a) Monitor:

Main components:

- **Display panel:** basic component such as an LCD (liquid crystal display) or LED (light emitting diode) that is responsible for producing an image.
- **Graphics card:** Converts electronic signals into images that are displayed on the monitor.
- **Backlight:** in LCD monitors, a light source behind the display panel that illuminates the screen.

How do they work?

Monitors work by receiving signals from the computer's graphics card and converting them into visual information. The graphics card sends electronic signals to the monitor, which are then converted into images on the screen. In LCD monitors, liquid crystals modulate the flow of light to produce images.

Connection types:

- **VGA (Video Graphics Array):** analog connection, becoming less and less common.
- **DVI (Digital Visual Interface):** Provides a digital signal with better image quality than VGA.
- **HDMI (High Definition Multimedia Interface):** Supports video and audio on a single cable and is commonly used in modern devices.
- **DisplayPort:** Similar to HDMI, it can transmit audio and video.
- **USB-C:** Some monitors use the USB-C port for power and display connection.

b) Printers (Thermal transfer printer):

Main features:

- **Thermal print head:** Heats thermal ribbon or paper, transferring ink to the printing surface.
- **Thermal ribbon or paper:** Contains ink or wax transferred to the printing surface.
- **Pressure roller:** Applies pressure to ensure good contact between the paper and the thermal print head.

How do they work?

The thermal print head selectively heats areas of the thermal ribbon or paper and transfers ink or wax to the paper to create the desired text or image. This process is precise and allows for high quality printing.

Connection types:

- **USB:** Commonly used for direct connection to computers.
- **Ethernet:** Allows network printing, commonly used in office environments.
- **Wi-Fi:** Allows wireless printing, convenient for multiple users and devices.

c) Scanner:

Main components:

- **CIS or CCD sensors:** Capture the image or text of the scanned document.
- **Scanning head:** Moves over the document to scan the entire image.
- **Dish or glass plate:** Position where the document to be scanned will be placed.

How does it work?

The scanner illuminates the document with light and the sensors (CIS or CCD) capture the reflected light, creating a digital image. The scanner head moves over the document or the document moves under the scanner head to scan the entire image.

Connection types:

- **USB:** Common for connecting scanners to computers.
- **Wireless (Wi-Fi):** Some scanners offer wireless connectivity for greater flexibility.
- **Ethernet:** Used in networked office environments for collaborative scanning.
- **Cloud integration:** Many modern scanners allow scanned documents to be uploaded directly to cloud services for easy sharing and storage.