



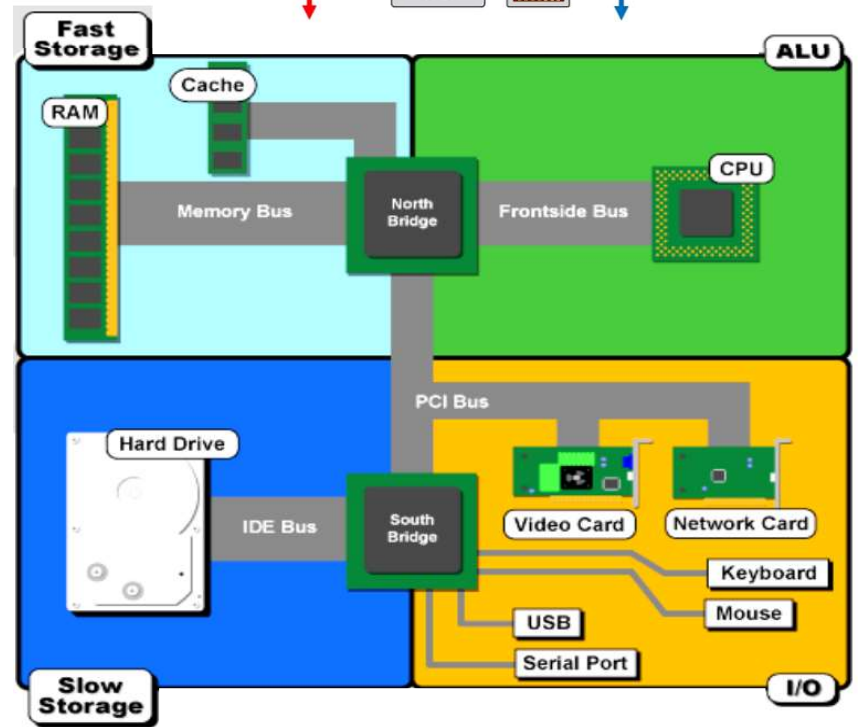
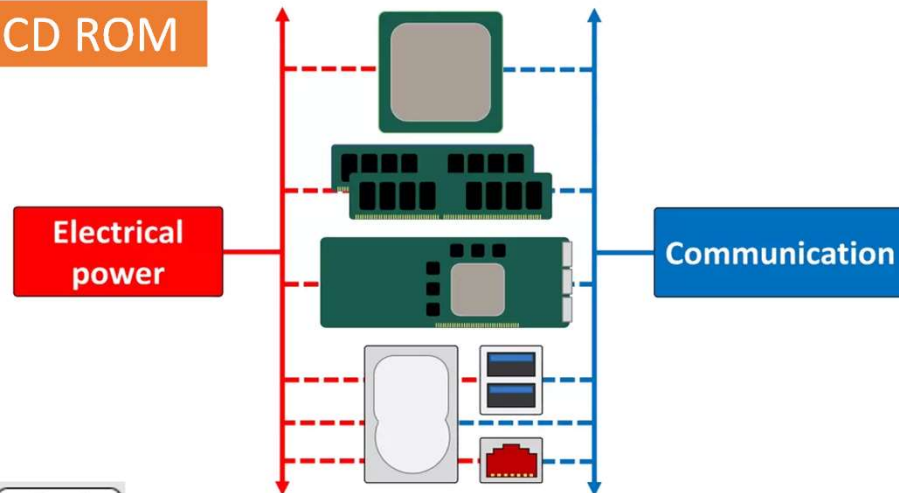
Keyboard

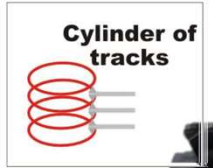
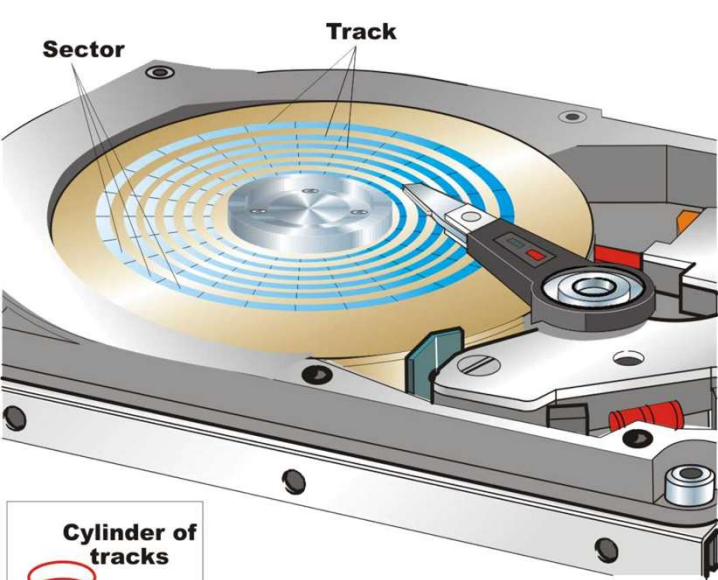
HDD

CD ROM

Inside your PC

It Connects the bits ...





**PERMANENT MEMORY: DISK** 8

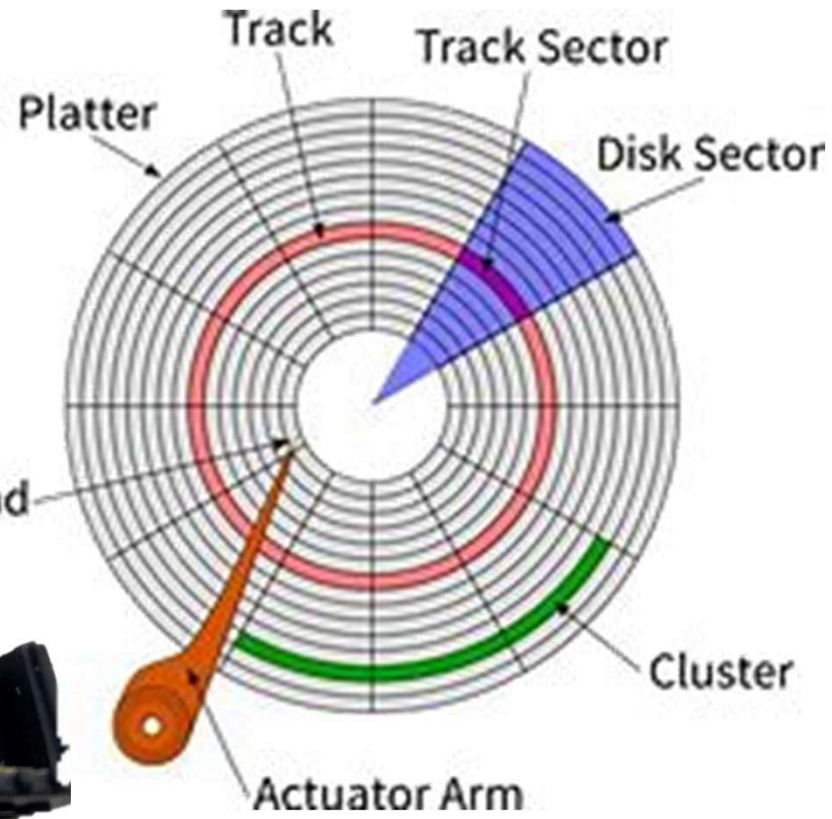
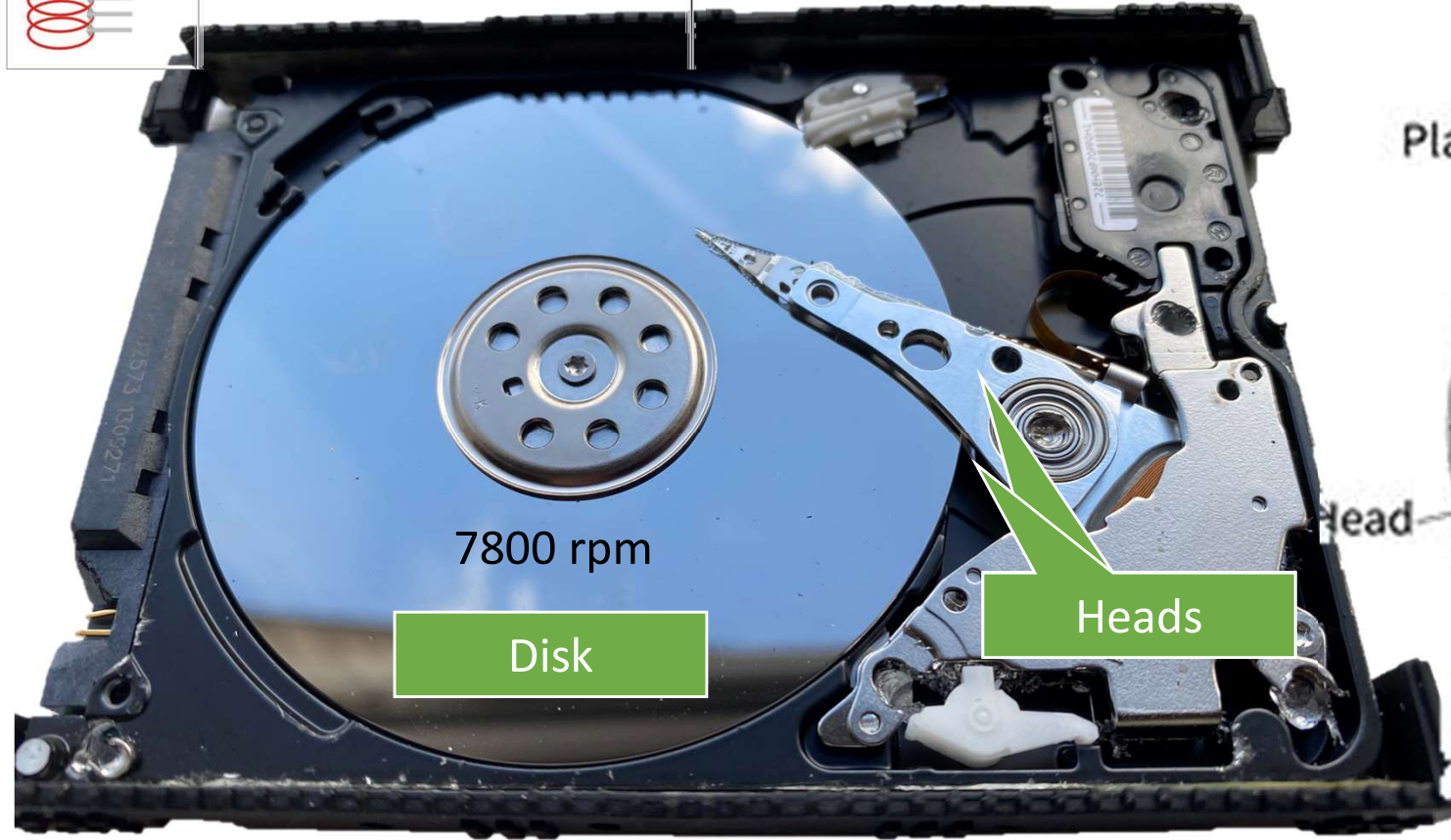
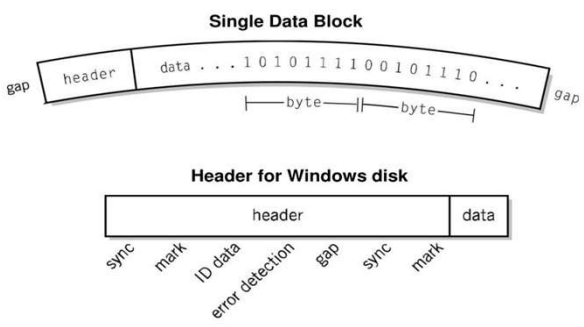
In an electronic world, disks are a mechanical/anachronism!

**Access Time =**  
 Seek Time (0-10 ms) +  
 Rotational Time (0-3 ms) +  
 Transfer time (.02 ms per 8K)

disk arm, disk head, rotation, track, cylinder, platter, arm movement

track, sector, block

# Inside the Hard Disk Drive



2 HDD Socket

PCI 'Lanes'

3 RAM Memory

2 SouthBridge

Southgate Heatsink

Flash RAM

BIOS Battery

4 CPU + Northbridge

Bus Voltage Reg.

Side 1 MOTHERBOARD

Flash RAM

Async Comms

Power in 0

Clock Regulation

Clock

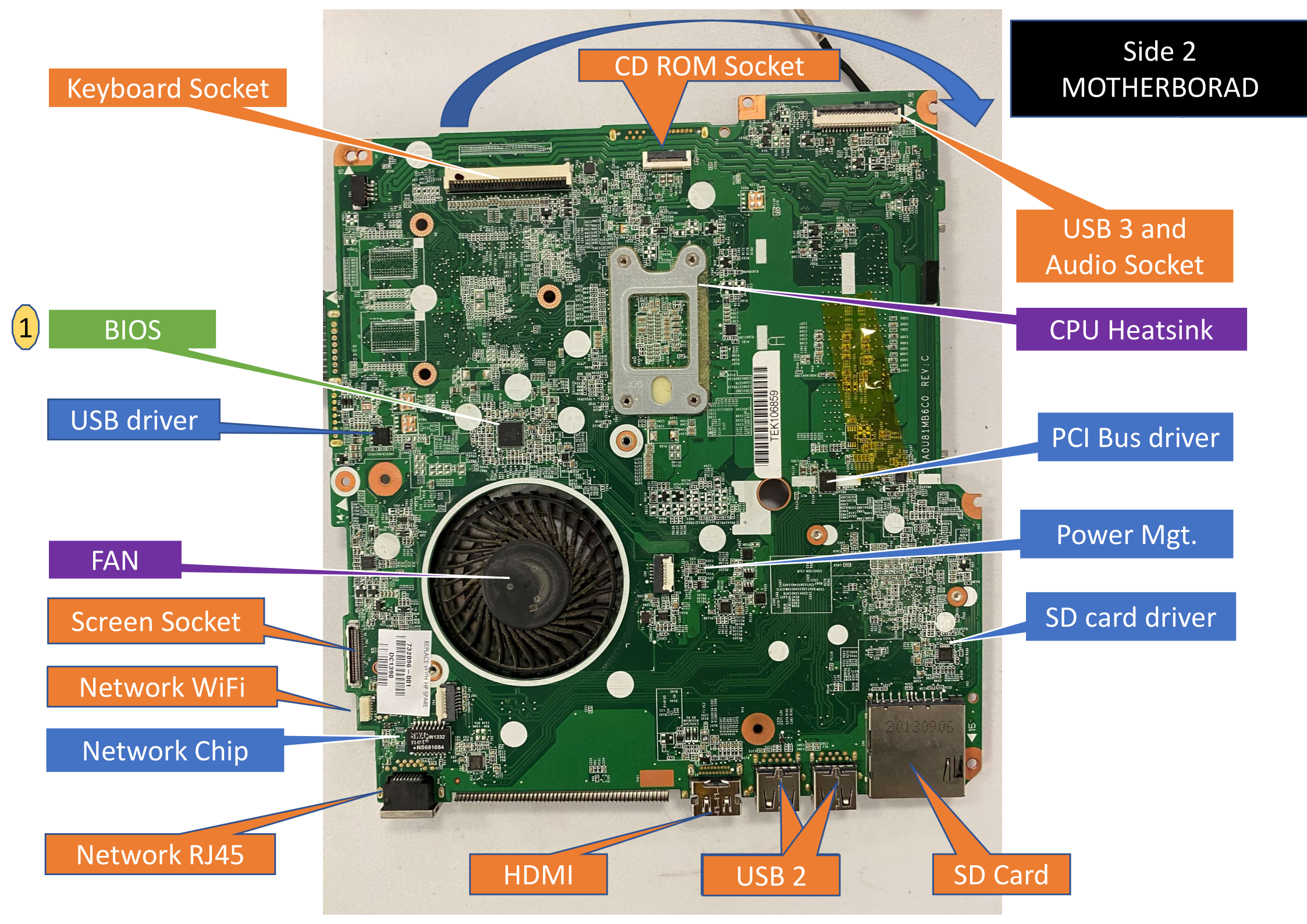
Cooling Fan

Audio amp

CPU Heatsink

Cooling Fins





Keyboard Socket

CD ROM Socket

Side 2  
MOTHERBOARD

USB 3 and  
Audio Socket

1 BIOS

CPU Heatsink

USB driver

PCI Bus driver

FAN

Power Mgt.

Screen Socket

SD card driver

Network WiFi

Network Chip

Network RJ45

HDMI

USB 2

SD Card