**FLOPPY DISK**

The floppy is an external storage device. It is a magnetic round disk enclosed in a plastic jacket. The data is stored in the magnetic surface of the floppy disk.

**History of Floppy Disk**  
*Alan Shugart* created the Floppy Disk Drive in year 1967. It was 8 inch in size, data stored on one side of about 100 KB. Data storage capacity was increased to 250 KB.  
 Then size of the Floppy Disk was decreased to 5.25 inch, and data stored on both side and capacity of about 360 KB. Then due to high density of data storage techniques was developed and data storage capacity increased to 1.2 MB. It has a Write Protect notch.  
 Then Floppy Disk new latest size developed of 3.5 inch of storage capacity 720 KB. After that data storage density increased and capacity of data storage increase to 1.44 MB. Data are written on both side of Floppy disk. It has also a *Write Protect Notch*.  
 You must slide the switch upward to enable data to be read and written to the floppy disk.

**3.5” Floppy Disk Drive**  
Floppy Disk Drive spins the Floppy Disk at a speed of 300 rotations per minute (rpm). This enables the floppy to be formatted with 80 tracks on each side of the disk. Each track is divided into 18 sectors. The sector can hold 512 bytes. An Eject button is used to eject floppy disk from the Floppy Disk Drive.

**Component of Floppy Disk Drive**  
**Read Write Head**: - It is used to write & read operation on Floppy disk; there is two heads on both side of the floppy. It converts the binary signal to electro magnetic signals.  
**Head Actuator**: - It used to move head inward and outward. It is connected to a motor that moves the head forward and backward, that motor called stepper motor.  
**Spindle Motor**: - It is a motor which spins the floppy disk in the Floppy Disk Drive with the speed of 300 rpm.  
**Circuit Board**: - It controls the speed of motors, and all other function of read/write.  
**FDD Controller**: - It forms the interface between FDD & the system.  
**Faceplate**: - It is also called as Bezel. The Floppy Disk is inserted in the Floppy Disk Drive through the front plastic window.

34-pin data cable is used to connect with the system.

Power Connect 4 pin

**COMPACT DISC**

CDs are optical storage devices used to store and distribute various forms of data such as software, music, images & movies. CD is cheap and reliable media. CD is round disc with a hole in the center that stores data. The CD holds about 700 MB of data.

Write data on CD is also known as Burn data.

**Types of CD**  
**CD-R (Compact Disc-Recordable)**: - The CD-R is like a blank book that you can write in using a pen. The CD-R disc has a special layer between the polycarbonate plastic layer and the reflective aluminum layer to store data on the CD-R disc. This layer is made up of a photosynthetic dye.  
**CD-RW (CD-Rewritable)**: - The CD-RW disc enables you to rewrite data to the CD-RW disc. The CD-RW has a special layer called, the phase change compound layer that makes it possible to rewrite data to the CD-RW disc.

**Types of CD Drives**  
The CD drives spin the CD like a fan and reads data form the CD using a laser beam. The speed of CD drive specifies the amount of data the CD drive reads from the CD.

**CD-ROM Drive**: - The CD-ROM drive can read data from the CD-ROM disc and the Audio Disc. You can use this drive to install software from a CD and play music from a CD-Audio.  
**CD-R Drive**: - The CD-R drive can read data from the CD-ROM, Audio CD and the CD-R disc. It can also write data to the CD-R disc.  
**CD-RW Drive**: - The CD-RW drive enables you to read, write and also rewrite data to the CD-RW disc.

**Components of the CD Drive**  
**Optical Head**: - *The Optical head of the CD-ROM drive consists of a read laser and an optical sensor*. The read laser targets a laser beam on the disc. The optical sensor collects the reflected laser beam from the disc.  
**Head Actuator**: - The head actuator moves the optical head forwards and backwards from the center of the CD disc to the outer end of the disc.  
**Spindle Motor**: - The spindle motor catches the CD when it is inserted in the CD drive and spins it. The circumference of the CD at its center is less than the circumference CD at the outer edge.  
**Loading Mechanism**: - The loading mechanism loads the CD in the CD drive. The frequently used method for loading the CD drive is the tray.  
**Jumpers**: - Jumpers are switches on the hardware that enables you to change the hardware settings. It enables you to set the CD drive as the master (MA), the slave (SL) or for Cable select (CS).  
**Logic Card**: - It controls & manages all the function of all components.

**DIGITAL VIDEO DISC**

Digital Versatile Disc is a form of digital storage. It offers higher capacity and better quality as compared to the CD. The storage capacity of a DVD is seven times that of a CD.

Data on a DVD is arranged in a spiral manner. The data in the DVD is recorded outwards from the center.

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**Types of DVD  
DVD-5**: - Single Sided Single Layered, capacity 4.7 GB  
**DVD-9**: - Single Sided Dual Layered, capacity 8.5 GB  
**DVD-10**: - Double Sided Single Layered, capacity 9.4 GB  
**DVD-18**: - Double Sided Dual Layered, capacity 17 GB

**Types of DVD drives  
DVD-ROM Drive**: - DVD-ROM drives can read different types of DVDs. These drives are read-only drives and cannot write of record information on a DVD.  
**Combo Drive**: - It is a combination of CD-R drive & DVD-ROM drive. This mean It reads data on CD & DVD disc, but write data only on CD-R disc.  
**DVD-RW Drive**: - The DVD-RW drive enables you to read, write on CD & DVD disc and also rewrite data to the DVD-RW & CD-RW disc.