

Floppy Drives :

- **A: or B:**
- **34-pin ribbon cable**
- Pin 1 on floppy drive cable to Pin 1 on Motherboard
 - Pin 1 has red stripe
- Uses **mini-power** or **molex**
- **CMOS :**
 - Can disable **Boot Up Floppy Seek**

Flash Memory

- **USB thumb drives :**
 - AKA. **jump drive** or **flash drive**
 - **Hot-Swappable**
 - Cross-platform
 - Can be **bootable**
- **Memory or Flash Cards**
 - **Compact Flash (CF)**
 - PCMCIA bus
 - CF I and CF II
 - Can be micro HDD
 - **SmartMedia**
 - Was competitor to CF
 - Replaced by Secure Digital
 - **Secure Digital**
 - **Most Common**
 - SD and SDIO
 - Mini and Micro forms
 - Popular in cell phones
 - **Memory Stick**
 - **Sony proprietary**
 - **xD Picture Card**
 - **Olympus**
 - **Card Reader**
- **Optical Media**
 - Writes data in “pits” and “lands”
 - **CD - Digital Audio (CDDA)**
 - Music CDs
 - **CD-ROM**
 - **ISO-9660 defines CD File System (CDFS)**



Micro SD card with SD card adapter

1 × 150 KBps	10 × 1500 KBps	40 × 6000 KBps
2 × 300 KBps	12 × 1800 KBps	48 × 7200 KBps
3 × 450 KBps	16 × 2400 KBps	52 × 7800 KBps
4 × 600 KBps	24 × 3600 KBps	60 × 9000 KBps
6 × 900 KBps	32 × 4800 KBps	72 × 10800 KBps
8 × 1200 KBps	36 × 5400 KBps	

CD-ROM speeds (multiples of 150 KBps)

- **CD-R (CD-Recordable)**
 - Burn or record CDs
 - **2 sizes :**
 - **74-minute (650 MB)**
 - **80-minute (700 MB)**
 - **Multi-session** : data can be added **multiple times**
 - **Single-session** : data can be added **once**
 - **2 speeds : write speed** → (8x / 24x) ← **read speed**
- **CD-RW (CD Rewritable)** {replaced CD-R}
 - **Specs have 3 values**
 - **write (8**
 - x**
 - **rewrite 4**
 - x**
 - **read 32)**
 - Can use **UDF** (Universal Data Format)
 - Replacement for **ISO-9660**
 - All DVDs use it
 - Supports **packet writing** (drag-and-drop)
- **Music CD-R**
 - Can record Music to CD-R or CD-RW
 - Cannot record from one
 - Due to copyrighted music
- **DVD (digital video discs):**
 - Released in 1996
 - **SS** → single-sided ; **DS** → double-sided
 - **SL** → single-layer ; **DL** → double-layer

DVD Version	Capacity	Marketing
DVD-5 (SS/SL)	4.37 GB	4.70 GB
DVD-9 (SS/DL)	7.95 GB	8.54 GB
DVD-10 (DS/SL)	8.74 GB	9.40 GB
DVD-18 (DS/DL)	15.90 GB	17.08 GB

- **DVD-Video**
 - 2+ hours of video on one side
 - Supports 4:3 and 16:9
 - **Uses MPEG-2**
 - Up to 1280 x 720 @60 fps
 - CD quality audio
- **DVD-ROM**
 - Similar to CD-ROM
 - Up to 16GB
- **Recordable DVD**
 - **DVD-R and DVD+R**
 - Can write like CD-R
 - Cannot erase
 - **DVD-RW, DVD+RW, DVD-RAM**
 - Can be written to and rewritten to like CD-RW
 - **DVD Multi** : Can read all these
- **Blu-ray Disk**
 - **Capacity** :
 - **25GB SL**
 - **50GB DL**
 - **Types** :
 - BD-ROM (read only)
 - BD-R (recordable)
 - BD-RE (rewritable)
 - **Hardware for watching HD**
 - Good processor
 - 1+ GB RAM in XP; 2+ GB RAM in Vista
 - HDCP-compliant GPU
 - High-Bandwidth Digital Content Protection
 - DVI or HDMI

References :

- Mike Meyers - CompTIA A+ Certification All-In-One Exam Guide 8th edition
- Micro SD card image :
<http://ecx.images-amazon.com/images/I/71foaXTwI6L. SL1500 .jpg>