

Serial Ports :

- Convert between serial and parallel devices
- 9 pin or 25 pin connector (Male)
- Used by modems and other devices
- 75 bps to 120,000 bps (9600 bps common)
- **Stop bits**, identify end of chunk



Serial Cable

USB :

- Host Controller (often in chipset)
- Root hub is like an expansion bus
- All devices connect to the root hub ports
- All devices share the same bandwidth
 - The more devices, the slower they run
- **USB 1.1 :**
 - 1.5 Mbps (low-speed)
 - 12 Mbps (full-speed)
- **USB 2.0 - backward-compatible**
 - **480 Mbps (Hi-Speed)**
 - **Speed is divided among all the devices**
- **USB 3.0**
 - Called **SuperSpeed USB**
 - Throughput speeds up to **5 Gbps**
- USB controller theoretically supports 127 devices
 - Add more hubs for more ports
- USB 1.1 and 2 cables can't be longer than 5 meters - USB 3 does not have this restriction
- **USB connectors and ports :**
 - A,B, mini-A, mini-B, micro-A and micro-B
 - USB A ports and connectors are for interfacing with the PC
 - Most peripherals use B, mini-B,...
 - Micro - Smartphones
- **USB configuration :**
 - **Install driver BEFORE installing devices** (except for USB thumb drives)



USB Connector Types

IEEE 1394 (FireWire)

- **IEEE 1394a**
 - 400 Mbps
- **IEEE 1394b**
 - 800 Mbps
- 6-pin powered connector
- 4-pin (unpowered) connector
- 9-pin 1394b connector
- **Devices can be :**
 - Connected to a hub
 - Daisy-chained
- **Up to 63 devices**
- **Max. cable length = 4.5 m**
- Can network computers in 2000/XP

Scanners :

- Can enable OCR (Optical Character Recognition)
- Resolution - DPI (Dots Per Inch)
- Color Depth (8-bits - 16-bits,...)
- Grayscale Depth
- Connection (USB or FireWire, usually)
- Scan speed - seconds

Biometric Devices

- Fingerprint
- Retinal
- Voice Recognition

KVM switch

- Keyboard, Mice and video switch

Digitizers

- Pen tablets



6-pin Fire Wire Cable

References :

- FireWire Cable Image :
http://static.musiciansfriend.com/derivates/19/001/314/067/DVo20_Jpg_Jumbo_580547.184.105_grey_ends.jpg
- USB cable Types image :
<http://wiki.robotz.com/images/d/d2/USBConnectorsCommon.jpg>
- Serial Cable Image : <http://www.usbgear.com/images/DB9PMM3FT.jpg>
- Mike Meyers - CompTIA A+ Certification All-In-One Exam Guide 8th edition

