USB

USB is the short form of Universal Serial Bus, a standard port that helps to connect computer peripherals like scanner, printer, digital camera, flash drive and more to the Computer. The USB standard supports the data transfer at the rate of 12 Mbps

Two important aspects of USB are its **support capability** and **total bandwidth**. USB is capable of supporting **127 USB devices** and has a total **bandwidth of 12 Mbit per second** which is equal to 1.5 MB per second. Working of a 12 Mbit (full speed device) or a 1.5 Mbit (low speed devices) depends on the total bandwidth of the USB.

USB Connections

Each USB device uses the standard **A type USB** connector to the **USB host** or Hub through **A type receptacle**. The other end of the USB cable has series **B connector** which is used to plug into the **B type receptacle**

USB A and B connectors

A connector is used for the upstream connection towards the host and **B connector** for the downward stream to the USB device. When the USB device is connected to the PC, it activates the host to recognize it. The PC detects the USB device and manages a control flow between the USB device and computer. PC also manages the data transfer between the USB device and PC. Once detected, the PC sends data to the USB system software to recognize it which then identify the device and assign an **address.** This address is used to detect the particular USB device. The software controls the input and output data between the PC and USB device. If the software fails to assign the address, PC will not detect the USB device.