If you use a PC at home or at Work

Congratulations

Your life just got

a whole lot

easier

Media Technology

Universal Serial Bus

Sreenu

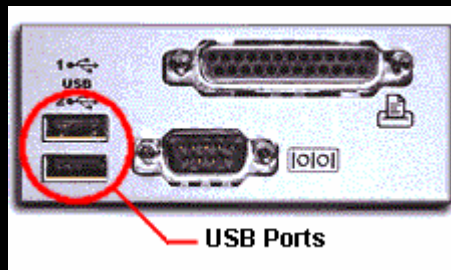## Basic Info

What is USB?

„must have" feature in today's PCs

„Plug and Play" peripheral connection

„One plug fits all"

Universal – all peripherals share same connector

Serial – devices can daisy chain together

USB Ports

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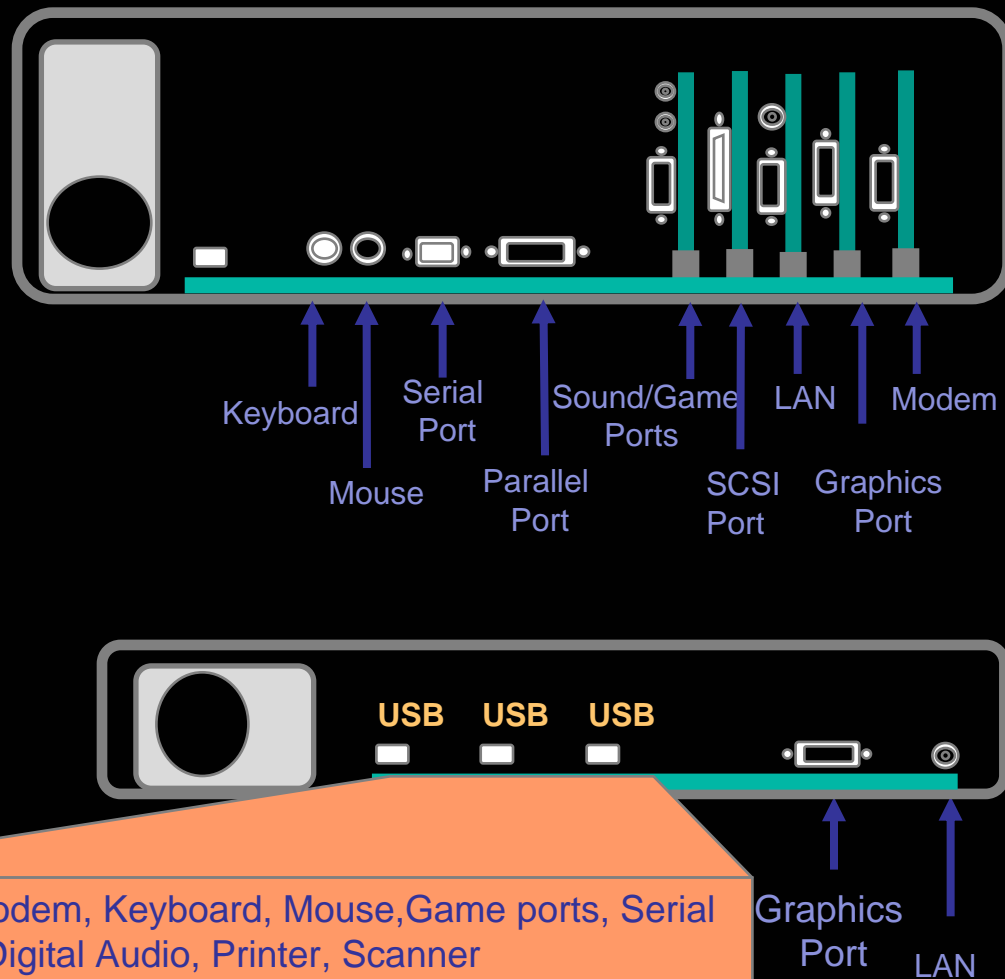## Basic Info

Why is USB?

no hassel way to connect peripherals

_makes adding peripheral devices so easy

_novice user can use it.

pc evolves into a simpler, easier to use appliance.

Basic Info

Keyboard

Serial
Port

Mouse

Parallel
Port

Sound/Game
Ports

SCSI
Port

LAN

Graphics
Port

Modem

USB   USB   USB

Telephony, Modem, Keyboard, Mouse, Game ports, Serial
ports Device, Digital Audio, Printer, Scanner

Graphics
Port

LAN

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Basic Info

USB's Story

Behind the Scenes

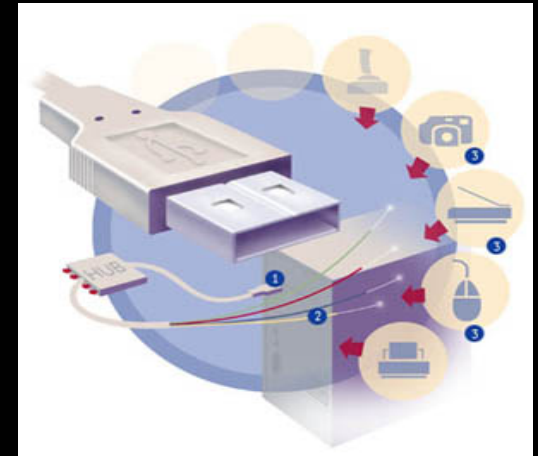### How USB works?

Device

    _ID - information about the device

    _plugged and unplugged

    drivers automatically loaded
    and unloaded.

Software

    _no special software is required

    _OS has necessary drivers

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Behind the Scenes

Devices connected to a USB port rely on the USB cable to carry power and data

USB Cable
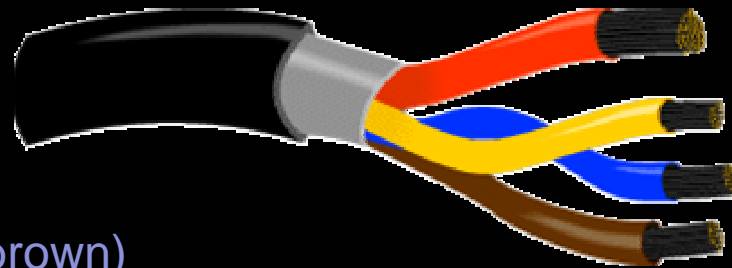
_2 wires for power :

+5 volts (red) and ground (brown)

Low power devices – draw thier power - bus

High power devices – their own power supplies

_twisted pair :

to carry data (yellow and blue)

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Behind the Scenes

How fast is USB?

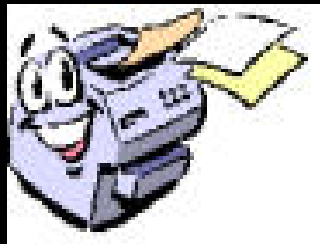High speed USB products have a design rate of **480 Mb/s**

Full speed USB devices signal at **12 Mb/s**

Low speed devices use **1.5 Mb/s** subchannel

Applications

USB is not designed for heavy multimedia usage;
however,
it is very capable handling low-end and mid-level devices.

USB can apply to

Advantages

Hot Pluggable

_no need to turn off or restart the computer

_connect USB peripherals when ever u need

Simple Installation

_simple installer applications

_supports dynamically loading drivers

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Advantages

Easy Connections

    _require no terminators or memory addresses

    _cable – small, simple, inexpensive and easy to atttach

Greater Expandability

    _simultaneous connection upto 127 devices

    _attach peripherals through interconnected external hubs

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Products

USB products offer high performance solutions for PC and peripheral applications

_Bali USB PVR (Personal Video Recorder)

Enables PVR functionality on a PC

Conversion of analog videotapes into VCD/DVD

_USB Pendrive

read, write, copy, delete and move data

play MP3 files, run applications, view videos

storage capacity: from 16MB – 1GB

Products

_USB Bluetooth Adapter

data trasfer among devices such as PDA's, printers, cellular phones, pc's and other emerging devices

_ability to share information

_obtain network access
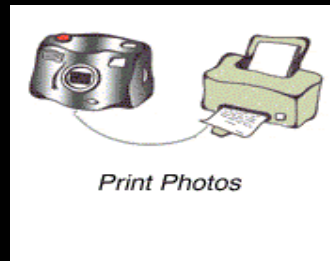
_take full advantage of wireless connected environment

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USB OTG (On-The-Go)

Past is history   **Future is mystery**

Present is omnipresent

Print Photos

new supplement to the USB 2.0 specification

augments the capability of existing mobile devices

handsets, mobiles, digicams, can be directly connected to USB devices

defined especially for portable devices

first products expected to ship during this year

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Summary

highlights of USB technology

_one standard connector type – one-size-fits-all

_hot insertion and removal

_chain devices together

_automatic installation

_separate power cord not required

_faster

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References

For information regarding USB in general

http://www.usb.org/home

http://www.everythingusb.com

http://www.usbman.com/index.htm

http://www.ti.com/sc/usb

For Products

http://www.mrusb.co.uk/

http://www.dlink.com/products/?pid=34#

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Questions