

# E Ball Technology

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**Abstract:** The E-Ball is a sphere shaped computer concept which is the smallest design among all the laptops and desktops have ever made. This PC concept features all the traditional elements like mouse, keyboard, large screen display, DVD recorder, etc, all in an innovative manner. E-Ball is designed to be placed on two stands, opens by simultaneously pressing and holding the two buttons located on each side. After opening the stand and turning ON the PC, pressing the detaching mouse button will allow you to detach the optical mouse from the PC body. This concept features a laser keyboard that can be activated by pressing the particular button. There's no external display unit, a projector will pop up by pressing and holding the button and focus the computer screen on the wall which can be adjusted with navigation buttons. If there is no wall around, the paper sheet holder, divides into three pieces like an umbrella just after popping up, will help to focus the desktop on a paper sheet.

**Keywords:** Virtual keyboard, virtual mouse, projectors.

## I. INTRODUCTION

The E-Ball concept is a sphere shaped computer which is the smallest design among all the laptops and desktops. E Ball is designed that pc is placed on two stands, opens by pressing and holding the two buttons located on each side of the E-Ball, this pc is the latest concept technology. This concept PC will measure

160mm in diameter and it was designed for Microsoft Windows OS. It is Design by APOSTOL TNOKOVSKI. E Ball doesn't have any external display unit. E-Ball is very small, it is having only 6 inch diameter sphere. It is having 120x120mm motherboard. It contains wireless optical mouse and laser keyboard, and LCD projector. It is portable and has large memory. E ball is useful for making video presentation and have greater speed. Supports user-defined keyboard layouts. When you want to carry it around you can easily "pack it" into a ball. This is a futuristic concept, and this is how the future computers will look like.

## II. FEATURES

It contain I-Tech virtual keyboard with dual core processor, 2GB RAM, 350-500 GB hard drive, integrated graphics and sound card. It contains wireless optical mouse and laser keyboard, and LCD projector. It has around 350-600GB of Hard Disk Drive. It contains 5GB RAM. It has two 50W speakers. It has LAN and WLAN card and a Webcam.

### PROCESSOR

Intel Core is a brand name used for various mid-range to high-end consumer and business microprocessor made by

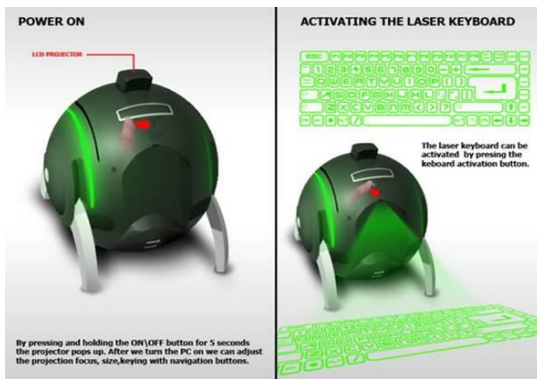
Intel. The current lineup of Core processors includes the latest following processors: Intel Core i7 Intel Core i5 Intel Core i3 Intel Core Intel Core Intel Core 2 Duo Intel Core 2 Solo Intel Core 2 Quad The e-ball pc basically uses Intel core 2 Duo processor.

### RAM

RAM stands for Random Access memory. It gets the word "random" because information can be accessed in non-sequential order. Though the data itself is stored tighter, it could be anywhere in the "container" or amount of RAM available. RAM is measure in "bits", and 8 bits equal to 1 byte. A kilobyte is equal to 1024 bits, and megabyte is equal to 1024 kilobyte. The E-BALL pc uses 2 GB of RAM. There are two type of ram: SRAM and DRAM.

## III. WORKING OF E-BALL

It contains wireless optical mouse and laser keyboard and LCD projector. It has around 350-600GB of Hard Disk Drive .It contains 5GB RAM. It has two 50W speakers. It has LAN and WLAN card and a Webcam. This device has an optical keyboard and a holographic display. So, don't have a physical keyboard and no monitor! Still, the mouse is physical but it fits in to the computer when you want to carry it around. E Ball don't have any external display unit, it has a button when you press this button a projector will pop and it focus the computer screen on the wall which can be adjusted with navigation keys. If there is no wall then it has a paper sheet holder that divides into three pieces like an umbrella just after popping up, and it will show desktop on the paper sheet. Also, the E-Ball PC supports a paper holder and the paper sheet on the holder could act like a screen where you can watch movies or something. This concept PC will measure 160mm in diameter and it was designed for Microsoft Windows OS. E-Ball concept pc has a laser keyboard that is fully a concept keyboard that is visible when the pc is in working. The keyboard is not physical - it is interpreted by lasers that appear after press the respective button. It recognizes your fingers with the help of an IR sensor when you are typing at a particular place, while the mouse is a pop out wonder making this an existing piece of technology. The software interface of E-Ball concept pc is highly stylized with icons that can be remembered easily that support all type of windows operating system. E-Ball concept pc work very easy while you are making video presentations, listening music watching large screen movies, and chatting on the net.



#### IV. ESSENTIAL PARTS VIRTUAL KEYBOARD

A virtual keyboard is a projection keyboard that is projected and touched on any flat surface. Virtual keyboard basically uses the principle of sensor technology and artificial intelligence to let users work on any surface. Whenever we press the keyboard button, it is projected optically on the flat surface and, as the user touches the image of the key, the optical device detects the stroke and sends it to the computer. Virtual keyboard basically consists of three components:-

##### a. The Sensor Module:-

The sensor module serves as the eyes of the Keyboard Perception technology. The Sensor Module operates by locating the user's fingers in 3-D space and tracking the intended keystrokes.

##### b. IR-light source:-

The Infrared Light Source emits a beam of infrared light. This light beam is designed to overlap the area on which the keyboard pattern projects. This is done so as to illuminate the user's fingers.

##### c. The Pattern Projector

The Pattern Projector basically presents the image of the keyboard. This image can be projected on any flat surface. The projected image is that of a standard qwerty-keyboard, with all the keys and control functions as in the keyboard.

**PROJECTOR**

E-BALL that is the concept pc basically uses LCD projector .LCD stands for liquid crystal display. LCD projectors are systems that display or project information or video onto a flat surface. Video signals are comprised of three colors: red, green, and blue.LCD projectors contain a separate glass panel for each. Each panel consists of two plates of glass with a layer of liquid crystal between them. When a charge is applied, the crystals open to allow light through or close to block it. This opening and closing of pixels is what forms the image. Two types of projectors used-

##### 1. LCD Projector

An LCD projector is a type video projector for displaying video, images or computer data on a screen or other flat surface. It is a modern equivalent of the slide projector or

overhead projector. To display images, LCD (liquid-crystal display) projectors typically send light from a metal-halide lamp through a prism or series of dichroic filters that separates light to three polysilicon panels – one each for the red, green and blue components of the video signal. As polarized light passes through the panels (combination of polarizer, LCD panel and analyzer), individual pixels can be opened to allow light to pass or closed to block the light. The combination of open and closed pixels can produce a wide range of colors and shades in the projected

##### 2. DLP Projector

Digital Light Processing (DLP) is a type of projector technology that uses a digital micromirror device. It was originally developed in 1987 by Dr. Larry Hornbeck of Texas Instruments. While the DLP imaging device was invented by Texas Instruments, the first DLP based projector was introduced by Digital Projection Ltd in 1997. Digital Projection and Texas Instruments were both awarded Emmy Awards in 1998 for the DLP projector technology. DLP is used in a variety of display applications from traditional static displays to interactive displays and also non-traditional embedded applications including medical, security, and industrial uses.

#### V. IF THERE IS NO WALL?

When we are working in an open place we can make use of a paper sheet as a screen. Paper sheet holder is placed at the back panel of this computer. The holder can be opened by pressing it in the lower part.

#### VI. ADVANTAGES OF E BALL

- It is portable.
- E-Ball has large memory.
- Useful for making video presentations.
- These have greater speed.
- Supports user-defined keyboard layouts
- It is efficient.
- It is very easy to use
- It is more secure than other computer.

#### VII. DISADVANTAGES OF E BALL

- Normal OS can't work in these computers.
- Cost of E-Ball is very high.
- It is difficult to understand if any problems occur in hardware components.

#### VIII. CONCLUSION

As years passes, the computer size is becoming smaller. Today's technology is at its peak point beyond what we could ever imagine. New inventions and innovations are emerging on daily basis. Our imaginations have dressed into reality and today it has become possible to have a whole computer in our pocket all the time. This ball computer has taken the computer technology to new horizons.

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