

- Projector,
- Optical mouse ,
- Virtual keyboard,
- Paper sheet holder,
- Power port,
- Modem port.

A) *Projector*

Projector focuses on the computer screen on a wall, on pressing and holding the button a projector will display from the upper surface on the E-ball. There are types of projector

- LCD (Liquid crystal display)
- DLP (Digital light processing)
- *LCD (Liquid crystal display)*

LCD is used to display videos, images & computer data on the screen. LCD uses metal halide lamp to emit the light and a series of Di-chloric filters to separate the lights. LCD video signals are comprised of primary colours: red, green & blue. LCD are more light efficient than DLP projectors. [6]

- *DLP (Digital light processing)*

DLP is based on DMD (Digital micromirror device) chip. Each DMD chip is comprised of two million of tiny mirrors. Each tiny mirror is capable of producing pixels. The advantages of DLP projector are higher contrast and less door screen effect. The image is created by small mirrors.

B) *Optical Mouse*

It is a wireless device which uses the graphitic light emitting diode for the purpose of movements of optical mouse [5]. E-ball can be easily carried from one place to another place.



Figure 3 Optical mouse

C) *Virtual Keyboard*

It is a wireless laser projection keyboard which uses the principle of sensor technology. **virtual keyboard** is also called **laser keyboard** [4]. It is not physical but it is visible on a flat surface when the PC is working. In laser keyboard infrared sensors are used. Keyboard consists of three components,

- Sensor module
- IR-light source
- Pattern-projector
- *Sensor module*

The sensor module acts as the eyes of the keyboard. It is used to detect which key is pressed by the user.

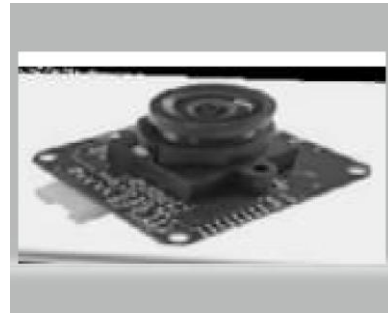


Figure 4 Sensor module

- *IR-Light source*

The IR-light source is not visible to the user. The IR-light source emits a ray of infrared light.



Figure 5 IR-Light source

- *Pattern Projector*

The pattern projector is used to display the image of the keyboard on a flat surface.



Figure 6 Pattern projector

D) *Paper Sheet Holder*

If there is no wall for projection of the computer screen, we can make use of a paper sheet holder. The holder can be opened by pressing it in the lower part of the PC for 5 seconds. It is used to portray the presentation. The Figure 7



Figure 7 Paper sheet holder

E) Power Port

The Power port is used to plug-in any electronic device such as DVD player.

F) Modemport

The Modem port is used to connect the internet to the computer.

5-STEPS OF E-BALL

1. Place the pc using the two stands on suitable surface it is opened by pressing and holding two buttons which is located at each side of the E-ball.
2. Adjust the LCD projector and detach the optical mouse from the body of E-ball.
3. The keyboard is activated by pressing the keyboard activation button.
4. Press the front button projector will pop up and a computer screen will be focused on wall. If there is no wall, use paper sheet holder.
5. Now E-ball is ready to use do whatever we want[5].

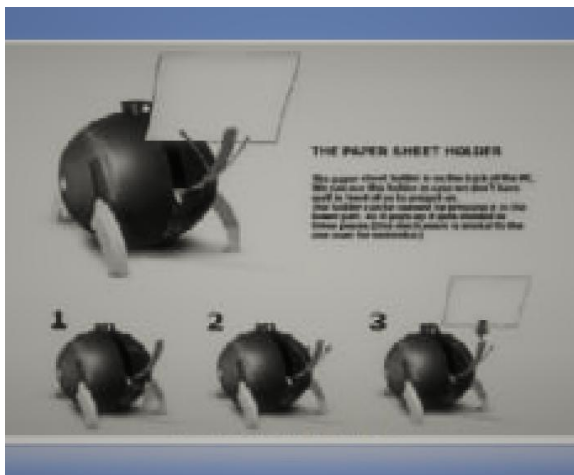


Figure:8 Paper Holder Steps

IV. SOFTWARE INTERFACE

The software interface of E-ball pc is highly stylized with icons that can be remembered easily that support all type of windows operating system. E- ball concept pc don't have any external display unit.

V. ADVANTAGE OFE-BALL

- It is portable.
- It is hard free to use.
- It is efficient.
- It has a larger storing capacity.
- It is easy to understand.



Figure: 9 E-ball

V. DISADVANTAGE OF E-BALL

- Cost of E-ball is higher .
- It is not easy to understand if there is any error in the hardware resource.
- The laser keyboard cannot work without smooth surface.
- It cannot work in Normal OS, Except than Microsoft windowsOS.

CONCLUSION AND FUTURE SCOPE

E-ball can be used in high-tech and industrial sectors, used with smart phone, PDAs, E-mail, word processing and spreadsheet tasks, also in operate theatres.

As, year passes, the computer size is becoming smaller. The world has come to our pocket because of E-ball pc device. The new concept of E-ball pc that has been proposed few years back but yet has not practically implemented for use in any field. The E-ball has taken the computer technology to new horizons.

References

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