

EON Mobile Icube™

Easy, Fast, Reliable and Intuitive Real-Time Interaction



Why use EON Mobile Icube™?

The EON Mobile Icube™ is a revolutionary PC based multi-sided immersive environment in which participants are completely surrounded by virtual imagery and 3D sound. Objects float in 3D space, can be touched and manipulated by users, and can be changed in real-time.

The EON Mobile Icube represents a significant innovative milestone in high-end visualization systems development. Typically, high-end immersive systems have until today been complex, difficult to use and expensive to maintain. Unlike the older generation UNIX based systems the EON Icube is easy to use even for non programmers, provides an unsurpassed speed of immersive content creation and deployment, utilizes a new light enhancing soft wall material, and has built-in collaborative capabilities.



Courtesy of Paul Howse, RCA Vehicle

“The EON Icube has taken its place alongside a number of other devices inside the Virtual Reality lab at the University’s Ingvar Kamprad Design Centre. Its uses extend well beyond the arena of academic research: So far, our activities have centred around architectural and design visualisation, historical reconstructions, simulation and in learning and training. We also want to make the Icube available to external clients to rent – for example, for a walk-through of a planned building.”

Joakim Eriksson, Research Engineer, Lund University, Sweden

Key Benefits

- Flawless **image continuity in the corners**.
- **Reliable and easy** to set up and maintain.
- Special **soft screen** with high gain, for 3D visualization, allows for **easy transportation and setup**.
- Heightened sense of **realism and immersion**.
- Multiple people can **share the stereo experience** and collaborate.
- **Superior image quality** with native 3,072x768 system resolution, 120Hz 3D stereo, **2,500 ANSI Lumens** brightness and 2,400:1 Contrast ratio.
- **View full scale of models** such as cars, buildings, machinery etc.
- **Sensory interaction** standard through the use of wireless 3D motion tracking.
- **Perspective viewing** through Active stereoscopic viewing technology.
- **EON Icube Software** for **perspective calculations and easy set-up** of new models including all features and functions of EON Immersive VR authoring environment.
- Modular **aluminum frame structure**.
- **Mobile rack for projector, computer and sound system**.
- **Interaction programming** using standard game controller.

EON Mobile Icube™

A Complete Turnkey Visualization and VR System



What is EON Mobile Icube™?

EON Mobile Icube is a complete turnkey visualization and virtual reality system offered in standard configuration with 3 walls for full immersion and reconfigurable from U-shape to power wall. It provides a high quality of graphics system, built on PC cluster technology, providing unsurpassed immersion, especially when used with motion tracking and VR interactive devices. The EON Icube offers the user-friendliest interface for developing VR applications fully integrated with the EON software technology.



Key Features

- **Alignment of viewing frustum** between view-ports for perpendicular screens depending on tracked viewing position.
- **Easy to use setup and user interface** to input screen dimensions, tracking system position and stereo-parameters for real-time viewport calculation as well as open up any existing EON application using templates showing a full Icube application within minutes.
- **Compatibility** with a wide range of Virtual Reality peripherals such as datagloves, Head Mounted Displays (HMD), motion tracking systems, joysticks etc.
- **Expands the scope and functionality** of a desktop or web based EON 3D application through true application scalability.
- **Cost effective** single or multi channel application via the use of EON Icube Software, a proprietary EON technology that enables multi-channel/cube displays systems using ordinary PC's.
- **Extensive application library** with over 100 ready to use EON applications from over ten major categories such as A/E/C, Design, Industrial, Medical etc.

EON Mobile Icube™

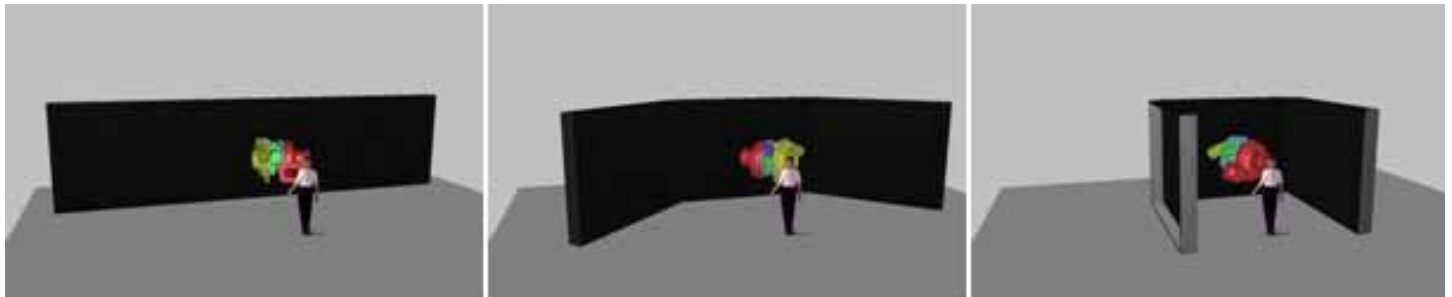
How It Works



EON Icube™ System Overview

Using EON Icube software and portable active stereo projectors, with stereoscopic glasses and motion tracking position trackers, the result is complete immersion of the user in a virtual world where objects float in space with high quality graphics. Motion trackers are implemented to monitor the user's position and orientation and are used to calculate a stereoscopic perspective view while allowing the user to freely move into and around the objects floating in space. The stereoscopic visualization is supported by an integrated audio surround system. Peripheral devices such as wands and gesture gloves can be integrated into the system.

EON Icube has the ability to rapidly deploy 3D interactive virtual simulations using a series of built-in classes of objects, drivers and a large library of 3D models, textures, and easy to use built-in functionalities. The system can also be used for remote immersive collaboration adding the EON Coliseum software allowing for connecting multiple Icubes remotely over a network.



EON Icube Software

- **Easy to use** graphical authoring tool allowing non-programmers to add complex interactive effects.
- **Easy import** of most generic CAD and 3D formats, allowing easy use and manipulation of objects and textures from a wide range of 3D modeling tools.
- **Pre-programmed interactive node functionality** that minimizes development time for new applications.
- **Graphical User Interface based web publisher** that makes it easier to embed EON applications with rich communication to web pages.
- **High rendering quality** - EON offers a superb visual quality incl. support for lightmaps and anti-aliasing.
- **Easily integrated** with other standard software.
- **Multi user environment** - several people can share the experience and collaborate.
- **Sensory interaction** through the use of data gloves, motion tracking and force feedback devices.
- **Perspective viewing** control through stereoscopic software settings.
- **Supports high quality quadbuffer stereo.**



Application Areas

- Architecture and construction
- Product presentations at conventions and rollouts
- Scientific visualization
- Remote training

EON Mobile Icube™

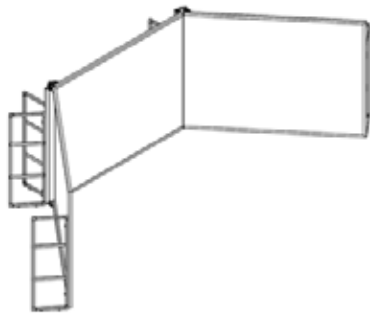
3-wall Reconfigurable Stereoscopic Solution



EON Mobile Icube is offered in the following standard configuration:

Using 3-Wall Reconfigurable 8' wide x 6' high viewing surface per screen.

Minimum throw distance behind screen is 5 feet, ceiling height requirement is 9 feet.



Integrated System Customers:

3D Sales Technologies, Germany
Bechtel
Boeing
Cornell University
Doncaster College, UK
Dubai Aerospace Enterprise, Dubai
HON/Allsteel
Ivolve Studios, Australia
Kurume Inst. of Techn., Japan
Lund University, Sweden
Maytag
Norfolk State University
Purdue University
Southeastern Inst. of Manuf. & Techn.
Suzuki
Temasek Polytechnic, Singapore
UCI
UCLA
University of Central Lancashire, UK
University of Missouri - Rolla
University of Montreal
University of Pennsylvania

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