



## iKee single-channel stereoscopic projection solution



With the GEMINI™, Barco introduces its “iKee” concept of immersive stereoscopic viewing. iKee stands for “Intelligent Kits for Easy Assembly”, making stereoscopic viewing easily accessible for an ever growing range of applications.

The Barco GEMINI is a proprietary, fine-tuned package with two high-brightness circular polarized projectors, pre-aligned mechanics, a choice of optional proprietary non-depolarizing projection screens, an optional optical tracking system and 10 perfectly matched luxurious stereo glasses.

Present V&AR applications in automotive design, oil & gas exploration, architecture engineering construction (AEC) and medical, pharmaceutical and scientific research, can now expand their V&AR facilities, while new markets will finally find an entry-level package to start using the fascinating capabilities of virtual reality.



## Barco Gemini™ widens the scope for collaborative stereoscopic viewing

- ✓ First in its class in Stereo Lumens
- ✓ Circular polarization  
(linear polarization optional)
- ✓ Optional proprietary Barco screens
- ✓ Perfectly matched stereo glasses
- ✓ Pre-aligned mechanics
- ✓ Front or rear projection
- ✓ Picture-in-picture
- ✓ Dual lamp
- ✓ No realignment needed after lamp replacement
- ✓ Full digital paths
- ✓ Full lens shift capabilities
- ✓ Optional optical tracking system
- ✓ All Barco original equipment



### Barco Gemini™, a complete single-channel stereoscopic projection package

- Powered by **Barco's iQ R500 LCD projectors** with native SXGA+ resolution (1,400 x 1,050 pixels)
- **Barco LCD projectors offer the brightness you need:** Switchable brightness: 2x 3,500 or 2x 5,000 ANSI lumens
- Circular polarization for excellent image separation and immersion
- **Pre-aligned** mechanical structure allowing for easy ceiling mount or tabletop installation.
- 10 Barco **luxurious stereo glasses, perfectly matched** to the circular polarization
- Cabling and installation guide



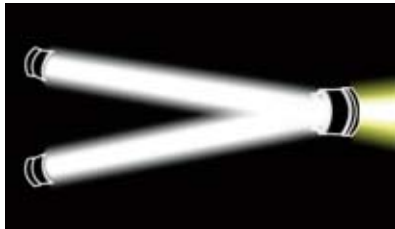
### Market leading: Pre-aligned mechanical structure

For the iQ R500, a modular mechanical structure has been designed for standing or ceiling mount installation. Projectors are accurately positioned and pre-aligned for perfect stereoscopic projection. Even when changing lamp units, this pre-alignment is not jeopardized.

# All original Barco equipment: your guarantee to top quality

## iQ series maximizes light efficiency and reliability

In Economy mode (3,500 ANSI lumens) the iQ series have a lamp system lifetime of 3,000 hours. In High Power mode (5,000 ANSI lumens) lamp lifetime is 1,500 hours in dual lamp



mode. Switching to single-lamp mode doubles the lamp system lifetime. The iQ projector lamps alternate intelligently, in order to reach end-of-life simultaneously. If one lamp should fail, the iQ's auto-sensing feature instantly switches to the other lamp. All without going into standby mode.



Click & plug lamp replacement, no realignment needed

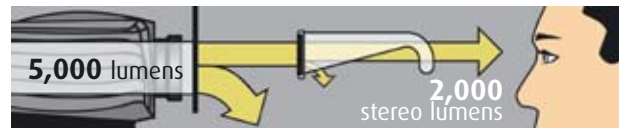
## High quality lenses

The standard configuration of the GEMINI™ includes a high quality 1.3-1.8 zoom lens. These lenses perfectly fit with Barco's proprietary front projection screen.

Matched very short throw lens, QVD 0.85 lens is available for the rear projection option.

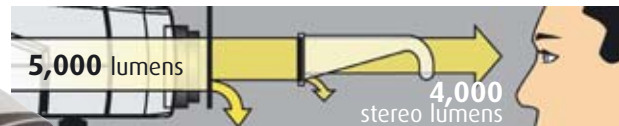


DLP projector with external polarization (non optimized)



stereo brightness efficiency: **40%**

Barco's GEMINI LCD projector with internal Barco polarization: Stereo Lumens Boost!



stereo brightness efficiency: **80%**

Barco's proprietary LCD projectors offer twice the stereo lumens brightness efficiency compared to DLP projectors with external polarization, with a resulting gain of 100%!

## True color reproduction

Barco's TCR provides advanced video processing for optimal color reproduction of the LCD panels, reaching the same high quality levels as the yearlong proven CRT color fidelity

TCR provides screen wide color fidelity and uniformity by intelligent color tracking and gamma correction.



## Circular polarized passive stereo glasses for full freedom of movement

10 circular individually packed stereo glasses are included in the GEMINI™ package. These glasses contain no active components and are easy to wear.

Thanks to the circular polarization, **the viewer can move around, tilt his head and change his viewing angle** relative to the stereoscopic projection display. This feature offers a far higher degree of freedom than with linear polarization where head tilting leads to loss of stereoscopic viewing.

Circular polarization requires a **tight match between the polarizing filters** in the light path of the projector and those in the glasses. Barco's proprietary stereo eyewear is perfectly fine-tuned to the projectors, resulting in high-quality stereo viewing.

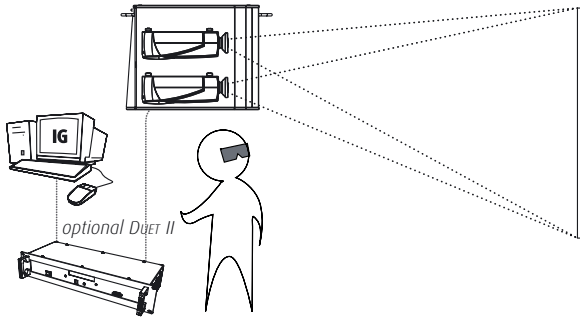


# Choose your configuration

## Optimized options for front or rear projection

Proprietary Barco screen options:

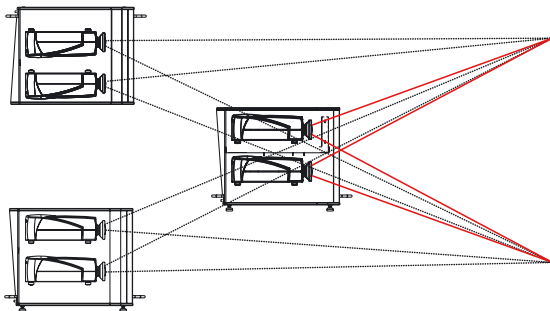
- non-depolarizing front screen, or
- flexible or semi-rigid rear screen



## Easy installation in ceiling mount or in tabletop position

The projector can be installed up to 120% off-axis (120% up, 30% down vertical shift), without losing any brightness or resolution.

On-axis rear-projection avoids ghosting.



## Optional proprietary Barco screens ensure highest stereoscopic perception

**Polarization maintaining wall-mounted front projection screen**

Dimensions 2.44 x 1.83 m (8 x 6 ft.)

**Wall-mounted high-contrast, flexible rear screen**

Two times better polarization maintenance than most common screens results in strong ghosting-reduction

Dimensions 2.44 x 1.83 m (8 x 6 ft.)

## Optional ART advanced realtime IR optical tracking system

Position and orientation measurement with high accuracy, short latency and fast data communication via ethernet. Flexible system setup with fast calibration.



*Barco's optional screens are available for self-standing use or in a wall-mountable frame.*

*In oil and gas exploration, 3D visualization is particularly valuable for interpreting seismic data as it brings unprecedented clarity to seismic volumes. Moreover the volume can be sectioned at will to reveal features that may not be apparent on the flat sections because of their orientation.*

*Barco's proprietary rear screen*



*Standard screen - Ghosting due to inadequate non-depolarization of the screen*

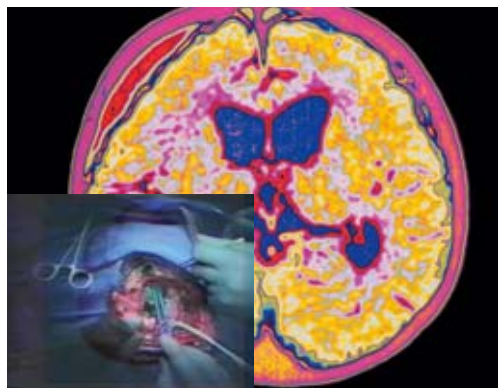
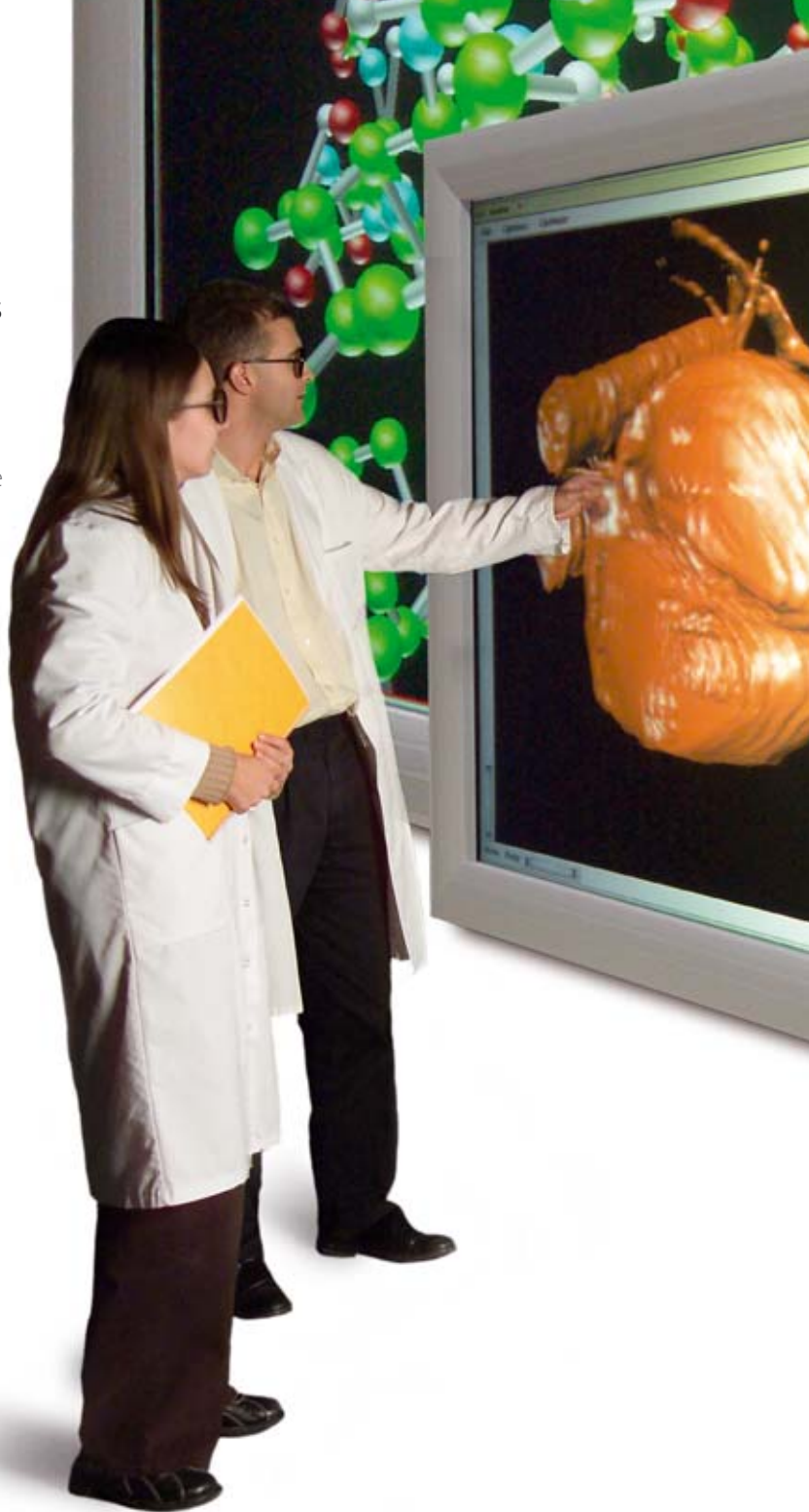
## Gemini™ promotes collaboration for analysis and decision making

Using powerful graphic software and Molecular Modeling simulation programs, which mimic the affinity of the molecule (macromolecular structures such as enzymes, proteins, DNA, etc), the researchers can obtain an idea of the possible action of the substance they are investigating.

## Stereoscopic viewing leads to intuitive understanding of the relationship between complex data

The extraordinary perspectives provided by teaching, using 3D-visualization imparts a deeper understanding and appreciation of the interrelationship of anatomical structures.

For surgery training, medical professionals can practice difficult procedures in a risk-free virtual environment. Image-guided surgery is being used for minimally invasive surgery.



*A live image captured during surgery can be displayed along side an MRI image*



*The picture-in-picture facility allows to zoom in on details during a videoconference.*

## Picture-in-picture: multiple information windows on your screen

Efficient analysis and decision making often means exchanging and retrieving information in a fast and efficient way. Each projector type of the GEMINI™ package is equipped with picture-in-picture capability, allowing you to **show up to three sources simultaneously** (2data and 1video). You can **resize and move the source windows on the screen** to create the perfect layout for your application. Depending on your source the information can be displayed in mono or stereo mode.

# Specifications

## GENERAL

### Input resolutions

All resolutions up to UXGA @ 110 Hz, including SXGA+ (1400 x 1050 pixels)

### Inputs

1x configurable 5-Wire (BNC) for: composite video, S-video, component video, RGBHV, RGBS, RGsB.  
1x composite video (BNC) (up to 7x composite video when using all connectors on top input board)  
1x S-video (4-pin mini-DIN) (up to 3x S-video when combining BNC's)  
1x VGA (D15 connector)  
1x DVI (Digital Visual Interface)  
Audio connections:  
1x stereo mic in  
1x stereo line in  
1x stereo line out

### Compatibility

- All current video sources (PAL, SECAM, NTSC) in Composite, S-VHS, Component or RGB formats
- All currently proposed HDTV, extended and improved television standards (1080i, 720p)
- Most sources with a pixel clock up to 160 MHz
- All computer graphics formats from VGA, SVGA, XGA, SXGA and UXGA (75 Hz)
- Most Macintosh computers
- Electronic workstations with a resolution up to 1600 x 1200 pixels/75 Hz
- DVI sources up to SXGA+

### AC power

Built-in universal power supply for operation on 85-230V, 50-60Hz

### Safety regulations

Compliant with UL 1950

### Electromagnetic interferences

Compliant with FCC part 15 Class A

### Weight

80 kg (176 lbs.)  
incl. CM-100 ceiling mount: 120 kg (265 lbs.)

### Standard warranty

1 year (non-consumables & labour)

### Dimensions

GEMINI iQ cabinet: h 69 x w 66 x d 89 cm  
h 27.1' x w 26.0' x d 36.0'  
iQ table support: h 70 x w 73 x d 84 cm  
h 27.5' x w 28.7' x d 33.1'  
Screen: w 2.44 X h 1.83 m  
w 8 x h 6 ft.

### Order information

GEMINI without screen	R9898360
GEMINI with front projection screen	R9898362
GEMINI with flexible rear projection screen	R9898364
Table support	R9898368

The GEMINI package always contains a high quality 1.3 - 1.8 zoomlens, except for the rear projection system (0.85 fixed lens).



*Barco's quality label for integrated productized systems guarantees state-of-the art equipment and underlines Barco's strong global commitment for after sales support.*

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Barco Simulation is an ISO 9001 registered company. The information and data given are typical for the equipment described. However any individual item is subject to change without any notice. The latest version of this product sheet can be found on [www.vr.barco.com](http://www.vr.barco.com).

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