

# Mirage Series

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Large venues  
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Entertainment  
On-screen advertising  
Scientific research  
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Automotive  
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## World's most installed 3D projector

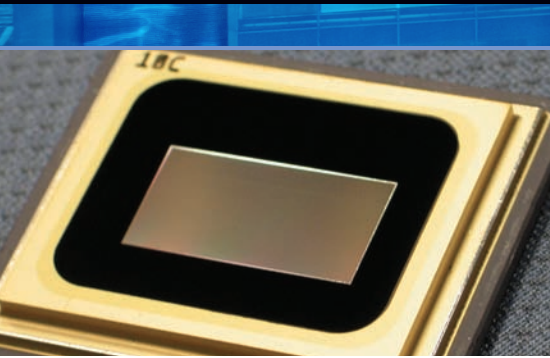
The Christie Mirage Series offers the first purpose-built stereoscopic line of projectors that are the most installed 3D projectors in the world. The series ranges from 2800 to 17,500 ANSI lumens for active stereoscopic images from a single projector. Mirage SXGA+ models and the new HD versions are designed specifically for use in a variety of 3D applications for all types of immersive environments including cubes or CAVE systems and curved or flat screen powerwalls.

The S+, 3-chip, 3D projectors provide four brightness options making them the brightest active-stereo DLP® product on the market. The Christie Mirage HD Series sets a new benchmark in stereographic projection as the first and only full (1920 x 1080p) HD active stereo solution – utilized in a single projector or multi-projector array.

Taking advantage of the proven 10-bit processing that has been used in our 2K resolution products, the Christie Mirage HD Series of projectors continues to exceed expectations in image quality and reproduction. High bandwidth supports the additional functionality of Picture in Picture with simultaneous multi-source stereo and/or mono viewing in foreground, background or both windows.

The HD Series enables a new level of compatibility with computers and infrastructures that display up to a full 120Hz HD active stereo without requiring super bandwidth DVI or Analog infrastructures. Solutions range from cost-efficient single projector systems up to high-end solutions, with high resolution, complex applications and multiple systems.

**CHRISTIE®**



## Why choose Christie DLP® products?

- Superior image quality
- Exceptional brightness
- Natural life-like color
- Unrivalled reliability
- Utmost versatility

## Display technology

Featuring high-quality DLP® technology, the Christie Mirage Series are highly reliable, deliver high brightness and unsurpassed color, brightness uniformity and control capabilities. As well, this proven digital technology is low maintenance.

## Image quality

The 3-chip SXGA+ engines are driven by Xenon illumination. They deliver superior image quality and the ability to color-match multiple projectors for extremely bright, color rich, uniform images – whether multiple projectors on a single screen, or multiple screen displays.

## Image processing

With 10-bit image processing, the Christie Mirage Series offers high bandwidth signal processing. It also supports the additional functionality of Picture in Picture with simultaneous multi-source stereo and/or mono viewing in foreground, background or both windows. The 220MHz bandwidth supports a 3D refresh rate of 115Hz at SXGA+ and 120Hz at SXGA. With the new HD models refresh rates of up to 120Hz with a full 1920 x 1080 resolution, visual output is now capable over a standard single link DVI-D or analog connection. For the first time ever, you don't need a super computer to drive your

3D applications. A single projector now gives you more resolution and a wider field of view for active stereo applications.

## Ease of use

A user-friendly Graphic User Interface (GUI) makes operation and set-up of the entire Christie Mirage Series uncomplicated. The GUI enables full and easy control of the projector. Multiple control options let the user choose what's best for their application – built-in, IR and wired remote keypad; RS-422 or RS-232 control; or through ChristieNET™ via the Ethernet port. Motorized lens functions provide power focus, zoom, horizontal and vertical offset functions – all at the touch of a button. Auto set-up recognizes sources and sets up correct brightness, contrast and position.

## Serviceability

Operation and maintenance of the Christie Mirage Series is easy as well. Quick internal access with 1/4-turn screws, a quick-change ballast, a removable image processing module, field-alignable DMDs and a cleanable optical engine, puts full control in the hands of the user. Replacement lamp costs are low and Christie offers the best warranties on the market.

## Standard accessories

- IR keypad (w/batteries)
- Line cord
- Stereo sync harness
- User manual

## Optional accessories

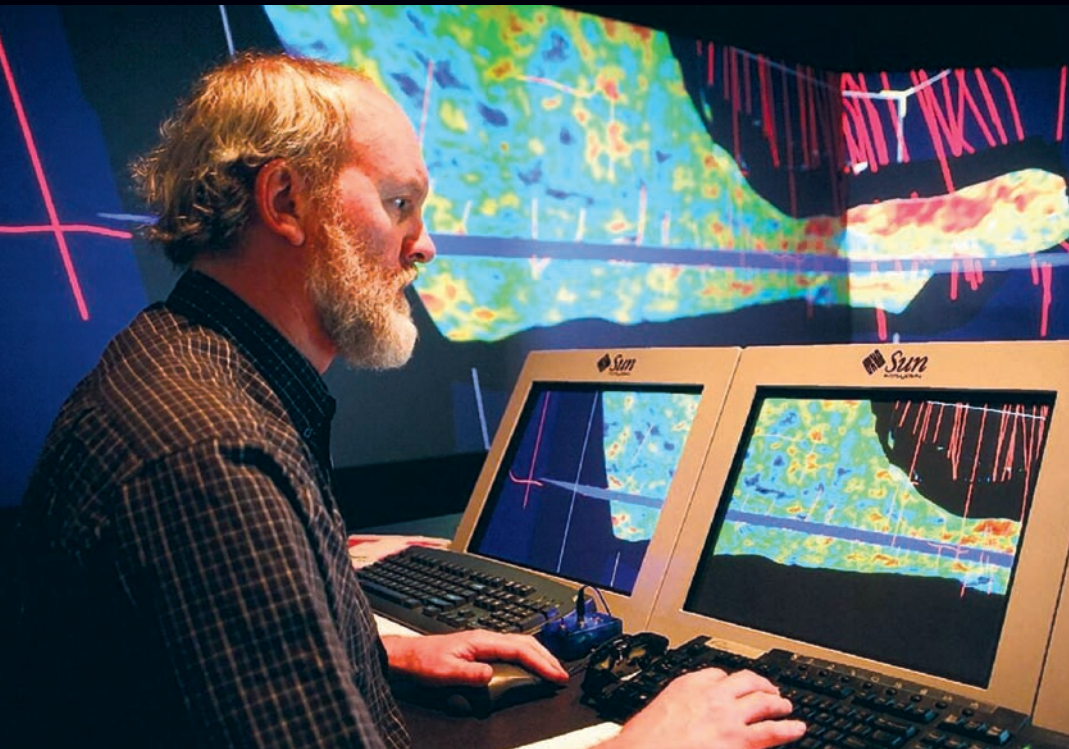
- Fixed and zoom lenses available with throw ratios from 0.67:1 to 7.3:1
- ChristieTWIST™ image warping module with enhanced edge-blending
- Wired remote control and RS-422 Two Way Controller
- Ethernet, RS-232, RS-422 cables
- Service manual
- KoRE™ 10-bit librarian
- Lens adapter (for competitive lens)
- Remote IR sensor



- ▶ The Christie Mirage Series features the widest source compatibility and has built-in Ethernet networking for full compatibility with ChristieNET™.

- ▼ Three Mirage Series projectors are the core of the South Australian Virtual Reality Center 3D visualization system.

The center is used mainly for oil and gas applications as well as research.



## Inputs

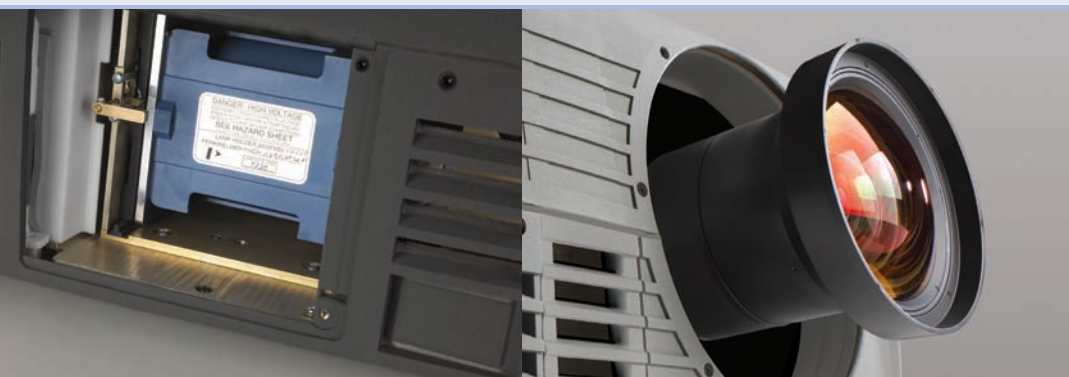
Installation flexibility and compatibility with virtually any data, video and HDTV source in use today... from VGA to QXGA.

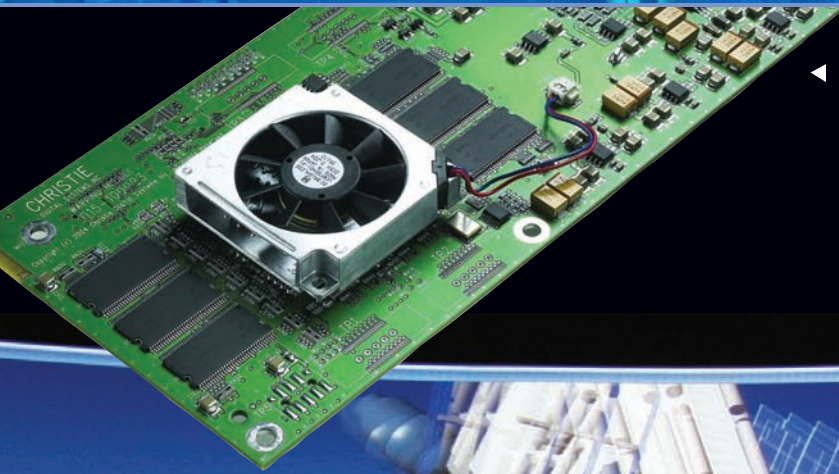
- RGBHV/YPbPr via 5 BNC
- DVI-I for Digital/analog/RGB/YPbPr (HDCP)
- One composite video, one S-Video
- Two optional slots for analog/digital modules
- Three RS-232 ports and one RS-422 port
- On-board ChristieNET™ connectivity (RJ45)
- Built-in backlit keypad and IR remote control

- ▼ From 500W to 3.0W, the Christie Mirage Series features user-replaceable Xenon lamp modules with adjustable lamp power for lower brightness. The stable color temperature over the course of the lamp life and the power range provides the best lamp technology for color matching across multiple screens.

- ▼ The Christie Mirage Series features an extremely high contrast ratio of 1500-2000:1 full field; 450-600:1 ANSI. With the motorized IRIS, users can adjust for high contrast ratio and better black levels, for any given application.

- ▼ A suite of optional, specifically-designed lenses includes both fixed and zoom lenses ranging from 0.67:1 to 7.5:1 zoom and features a durable lens mount with motorized horizontal and vertical offset. With quick lens insertion, the Christie Mirage Series is easy to work with.





◀ ChristieTWIST™—the ultimate in total image control. ChristieTWIST™ provides users with fingertip control to expertly edge-blend multiple images on all four sides seamlessly, or warp an image to any shape on any surface. With blending and warping grids that are completely user-definable and offer an extremely fine level of control, displays can take on any shape or dimension required. And the multiple warps and blend properties can be stored on the projector.



▲ Louisiana Immersive Technologies Enterprise (LITE) – a joint effort of the State of Louisiana, the Lafayette Economic Development Authority (LEDA) and the University of Lafayette. The 61,000 square foot complex enables users to collaborate and interact in real-time with even the most complete computer graphics models. This first of five phases includes an active stereo curved screen display for

audiences up to 20, featuring Christie Mirage S+4Ks and SGI's visualization and computing ingenuity. LITE involves partnerships between government, universities and industry for basic research, application development, testing and validation, product development and commercial production, along with delivery of visualization technologies and super-computer modeling.



- ◀ Direct key access to the most-used major functions and auto set-up of sources with correct brightness, contrast and position means operation and set-up of the Christie Mirage Series are intuitive.

## ChristieTWIST™ – total image control

With Christie's image warping and edge-blending module, you can display virtually any image on virtually any surface. ChristieTWIST™ provides users with fingertip control to expertly edge-blend multiple images on all four sides seamlessly, or warp an image to any shape on any surface.

For high-quality, larger-than-life displays, the Primary Color Adjust (PCA™) and input/output gamma correction will match blended images perfectly with exact color matching between displays. Or, warp to any shape surface – curved or spherical screens and anything in-between. Controlled through a user defined warp grid and easy to use software – ChristieTWIST™ features user controllable latency of less than one frame. With blending and warping grids that are completely user-definable and offer an extremely fine level of control, displays can take on any shape or dimension required. And the multiple warps and blend properties can be stored on the projector.

## Brightness uniformity control

Adjusts center-to-edge brightness uniformity across the image – with the Christie Mirage Series you can achieve up to 100% uniformity.

## Dark interval adjustment (DIA™)

DIA™ gives the user a mechanism to tune the projector's interaction with the LCD shutter glasses to achieve the optimum image with a minimum of color artifacts or cross-talk between left and right eye images. The dark interval is the time between left and right frames when the projector is showing black.

## Stereo sync harness

Simplifying projector set-up for the end-user, the stereo sync harness can provide projector control of the phase of the output through the menu. This purpose-built function for active stereo projection supports emitters and enables left/right inversion.

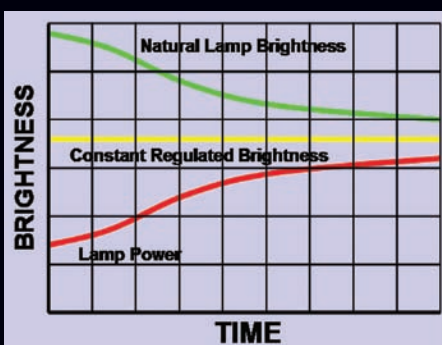
## Minimum delay feature

The Christie Mirage Series provides a less than one frame delay in image processing between input and display. This requirement is critical for applications where user response is dependent on the visual display, without loss of detail, flicker or motion artifacts.

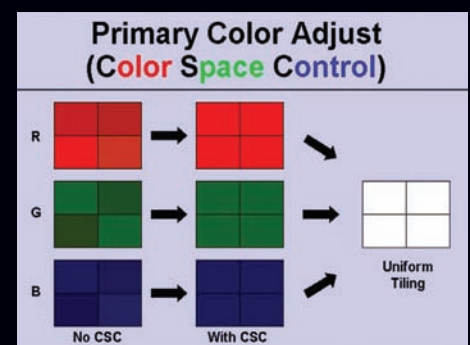
## Competitive advantages

- Higher resolution - SXGA+ 1400 x 1050 or full HD 1920 x 1080
- Twice the contrast (1500-2000:1)
- Internal scaling of stereo signals
- Internal warping and enhanced edge-blending module option with ChristieTWIST™
- Built in ChristieNET™ for networking and control
- First and only full HD 1920 x 1080 3D projectors
- Supports full 120 Hz active HD stereo without requiring ultra-high bandwidth through unique video processing
- Stereo video capable with optional HDSI input module on Mirage HD

- ▼ Christie's Comprehensive Color Adjustment provides the ability to individually adjust actual RGB channels for even color matching within individual projectors. This produces true color representation across multi-screen applications for a completely blended image.



- ◀ Christie's LiteLOC™ feature provides constant brightness tracking and monitors lamp output. It also automatically adjusts the power to ensure constant, uniform brightness across the image - on a multiple-projector screen or multiple-screen display.



Mirage S+3K		Mirage S+6K	
Image	<ul style="list-style-type: none"> <li>• 3000 ANSI lumens (±10%)</li> <li>• 90% brightness uniformity</li> </ul>	<ul style="list-style-type: none"> <li>• 5500 ANSI lumens @ 120 VAC, 6500 ANSI lumens @ 200-240 VAC (±10%)</li> <li>• 90% brightness uniformity</li> </ul>	
Dimensions (excluding lens)	<ul style="list-style-type: none"> <li>• Weight: 72 lb (32.1 kg)</li> <li>• Shipping weight: 115 lb (52 kg)</li> <li>• Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)</li> </ul>	<ul style="list-style-type: none"> <li>• Weight: 72 lb (32.1 kg)</li> <li>• Shipping weight: 115 lb (52 kg)</li> <li>• Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)</li> </ul>	
Lamp	<ul style="list-style-type: none"> <li>• 500W CERMAX® Xenon pre-aligned lamp module</li> <li>• 1500 hours, typical lamp life</li> <li>• LiteLOC™</li> </ul>	<ul style="list-style-type: none"> <li>• 1.0kW CERMAX® Xenon pre-aligned lamp module</li> <li>• 1500 hours, typical lamp life</li> <li>• LiteLOC™</li> </ul>	
Power requirements	<ul style="list-style-type: none"> <li>• 100–240 VAC (±10%) @ 50/60 Hz</li> <li>• Power consumption: 1000W max.</li> <li>• Thermal dissipation: 3412 BTU/hr</li> <li>• Operating current: 10A @ 100V, 5A @ 200V</li> </ul>	<ul style="list-style-type: none"> <li>• 100–240 VAC (±10%) @ 50/60 Hz</li> <li>• Power consumption: 1600W max.</li> <li>• Thermal dissipation: 5460 BTU/hr</li> <li>• Operating current: 12A @ 100V, 8A @ 200V</li> </ul>	
Regulatory approvals	<ul style="list-style-type: none"> <li>• UL/CSA/IEC 60950 (3rd edition)</li> <li>• FCC Class A, CE, CCC (pending)</li> <li>• RoHS and WEEE compliant</li> </ul>	<ul style="list-style-type: none"> <li>• UL/CSA/IEC 60950 (3rd edition)</li> <li>• FCC Class A, CE, CCC (pending)</li> <li>• RoHS and WEEE compliant</li> </ul>	

Mirage HD3		Mirage HD6	
Image	<ul style="list-style-type: none"> <li>• 2800 ANSI lumens (±10%)</li> <li>• 90% brightness uniformity</li> </ul>	<ul style="list-style-type: none"> <li>• 6000 ANSI lumens @ 200-240 VAC (±10%), 5000 ANSI lumens @ 110 VAC (±10%)</li> <li>• 90% brightness uniformity</li> </ul>	
Dimensions (excluding lens)	<ul style="list-style-type: none"> <li>• Weight: 75 lb (34 kg)</li> <li>• Shipping weight: 115 lb (52 kg)</li> <li>• Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)</li> </ul>	<ul style="list-style-type: none"> <li>• Weight: 75 lb (34 kg)</li> <li>• Shipping weight: 115 lb (52 kg)</li> <li>• Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)</li> </ul>	
Lamp	<ul style="list-style-type: none"> <li>• 500W CERMAX® Xenon pre-aligned lamp module</li> <li>• 1500 hours, typical lamp life</li> <li>• LiteLOC™</li> </ul>	<ul style="list-style-type: none"> <li>• 1.0kW CERMAX® Xenon pre-aligned lamp module</li> <li>• 1500 hours, typical lamp life</li> <li>• LiteLOC™</li> </ul>	
Power requirements	<ul style="list-style-type: none"> <li>• 100–240 VAC</li> <li>• Power consumption: 879W max.</li> <li>• Thermal dissipation: 3000 BTU/hr</li> <li>• Operating current: 10A @ 100V, 5A @ 200V</li> </ul>	<ul style="list-style-type: none"> <li>• 100–240 VAC</li> <li>• Power consumption: 1600W max.</li> <li>• Thermal dissipation: 5460 BTU/hr</li> <li>• Operating current: 10.4A @ 100V, 8A @ 200V</li> </ul>	
Regulatory approvals	<ul style="list-style-type: none"> <li>• CAN/CSA-C22.2 No 60950-1-03 (1st edition); UL 60950-1 (1st edition); IEC 60950-1:2001</li> <li>• FCC part 15, EN55024 (CISPR24) and EN55022 (CISPR22) Class A</li> <li>• International certifications: eK, CE, CCC, PSE</li> </ul>	<ul style="list-style-type: none"> <li>• CAN/CSA-C22.2 No 60950-1-03 (1st edition); UL 60950-1 (1st edition); IEC 60950-1:2001</li> <li>• FCC part 15, EN55024 (CISPR24) and EN55022 (CISPR22) Class A</li> <li>• International certifications: eK, CE, CCC, PSE</li> </ul>	



◀ When Christie first announced their Mirage S+4K projector, VR specialists Virtualis became an early adopter, recommending it to the British Geological Survey. A Christie Mirage S+4K is rear projected with a 0.73:1 lens on a 3.1m x 2.3m screen as part of an integrated StereoWorks 3D visualization system at the British Geological Survey's headquarters in Keyworth, Nottingham, UK.

**Mirage S+8K****Mirage S+14K** (build to order)

- 8500 ANSI lumens ( $\pm 10\%$ )
- 90% brightness uniformity

- 16,000 ANSI lumens ( $\pm 10\%$ )
- 90% brightness uniformity

- Weight: 72 lb (32.1 kg)
- Shipping weight: 115 lb (52 kg)
- Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)

- Weight: 140 lb (63.6 kg)
- Shipping weight: 160 lb (72.7 kg)
- Size (L x W x H): 32.1 x 24.5 x 15.1" (815 x 631 x 384mm)

- 1.2kW CERMAX® Xenon pre-aligned lamp module
- 1500 hours, typical lamp life
- LiteLOC™

- 2.4kW Xenon Bubble lamp
- 750 hours, typical lamp life

- 200–240 VAC ( $\pm 10\%$ ) @ 50/60 Hz
- Power consumption: 2000W max.
- Thermal dissipation: 6825 BTU/hr
- Operating current: 10A @ 200V

- 200–240 VAC ( $\pm 10\%$ ) @ 50/60 Hz
- Power consumption: 4000W max.
- Thermal dissipation: 13,648 BTU/hr
- Operating current: 20A @ 200V

- UL/CSA/IEC 60950 (3rd edition)
- FCC Class A, CE, CCC (pending)
- RoHS and WEEE compliant

- UL/CSA/IEC 60950 (3rd edition)
- FCC Class A, CE, CCC (pending)
- RoHS and WEEE compliant

**Mirage HD8****Mirage HD18** (build to order)

- 8000 ANSI lumens ( $\pm 10\%$ )
- 90% brightness uniformity

- 17,500 ANSI lumens ( $\pm 10\%$ )
- 90% brightness uniformity

- Weight: 75 lb (34 kg)
- Shipping weight: 115 lb (52 kg)
- Size (L x W x H): 22.3 x 26.0 x 12.3" (566 x 660 x 313mm)

- Weight: 135 lb (61.4 kg)
- Shipping weight: 160 lb (72.7 kg)
- Size (L x W x H): 32.1 x 24.5 x 15.1" (815 x 631 x 384mm) excluding lens, feet and stacking points

- 1.2kW CERMAX® Xenon pre-aligned lamp module
- 1500 hours, typical lamp life
- LiteLOC™

- 2.4kW Xenon Bubble lamp
- 750 hours, typical lamp life

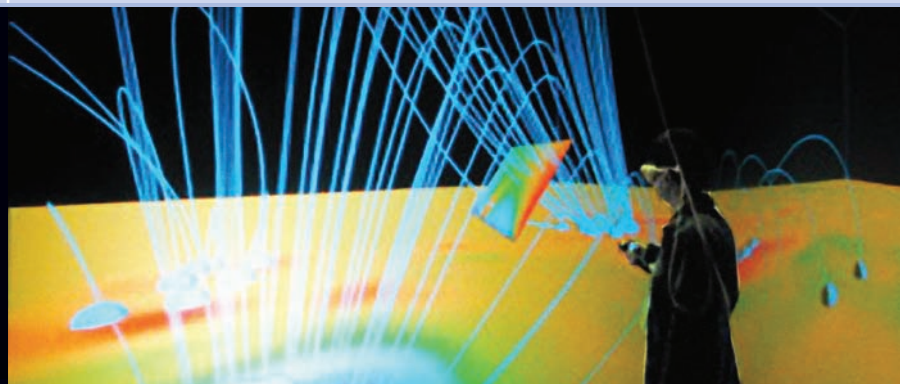
- 200–240 VAC
- Power consumption: 2000W max.
- Thermal dissipation: 6825 BTU/hr
- Operating current: 10A @ 200V

- 200–240 VAC
- Power consumption: 3900W max.
- Thermal dissipation: 13,320 BTU/hr
- Operating current: 24A @ 200V

- CAN/CSA-C22.2 No 60950-1-03 (1st edition); UL 60950-1 (1st edition); IEC 60950-1:2001
- FCC part 15, EN55024 (CISPR24) and EN55022 (CISPR22) Class A
- International certifications: eK, CE, CCC, PSE (pending)

- CAN/CSA-C22.2 No 60950-1-03 (1st edition); UL 60950-1 (1st edition); IEC 60950-1:2001
- FCC part 15, EN55024 (CISPR24) and EN55022 (CISPR22) Class A
- International certifications: eK, CE, CCC, PSE (pending)

- ▶ Japan's National Institute for Fusion Science completed a CAVE® VR system using four Christie Mirage 2000 active stereoscopic DLP® projectors for their Theory and Computer Simulation Center. The CAVE configuration comprises three soft screens for the walls and one hard screen for the floor. Each screen measures 10-foot by 10-foot. Four Christie projectors using four mirrors display stereo color images generated by an SGI ONYX2 graphic workstation. The wall screen images are rear-projected and the floor screen image is front-projected from a ceiling-mounted Mirage 2000 projector.



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