Mirage Series

Architecture
Automotive
Entertainment
Large venues
Manufacturing
Museums and education
Oil and gas exploration
On-screen advertising
Scientific research
Theme parks

World's most installed 3D projector

The Christie Mirage Series offers the broadest range of 3-chip 3D active stereo projection in either a single projector, or a multi-projector array. The first purpose-built stereoscopic projectors, this series represents the most installed 3D projectors in the world. Brightness ranges from 3000 to 18,000 ANSI lumens. SXGA+, HD and the latest WUXGA models are designed specifically for use in a variety of 3D applications for all types of immersive environments including cubes or CAVE-like systems and curved or flat screen power walls.
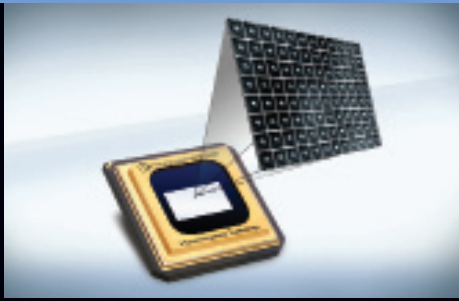
The series expansion with WUXGA resolution provides an increase field of view and an optimal aspect ratio for greater choice and installation flexibility for visualization displays. Offering even more pixels with 1920 x 1200 resolution and active stereo from a single projector, the Mirage Series is simple to set up and easy to use.

3-chip DLP® 3D active stereo projection up to 120Hz – the Mirage Series ranges from cost-efficient single projection systems to high end solutions encompassing high resolution, complex applications and arrayed solutions.

Christie – more pixels, more projectors, more reality.

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 is highly reliable, delivers high brightness and unsurpassed color, brightness uniformity and control capabilities. As well, this proven digital technology is low maintenance with greater than 650,000 hours Mean Time Between Failure (MTBF).

Image quality

The Christie Mirage Series projectors are illuminated by Xenon lamps. 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. The S+ series feature 220MHz bandwidth that supports a 3D refresh rate of 115Hz at SXGA+ and 120Hz at SXGA. Unique to the HD and WUXGA series, refresh rates are processed up to 120Hz with full 1920 x 1080 resolution.

3D content can be supplied to the projector over single link DVI-D, analog and/or optional HD-SDI connections.

The Mirage HD models support Picture-in-Picture functionality with simultaneous multi-sources stereo and/or mono viewing in foreground, background or both windows.

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 – all at the touch of a button. Auto set-up recognizes sources and sets 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
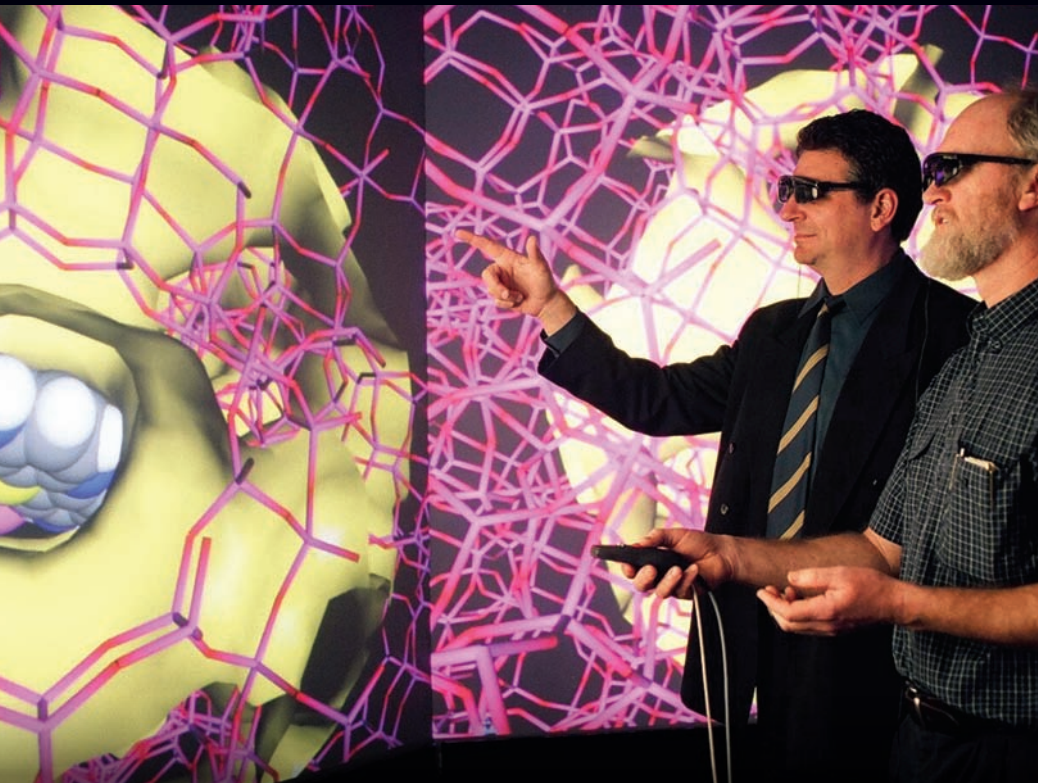- Stereo sync harness
- User manual

Optional accessories

- Fixed and zoom lenses available with throw ratios from 0.67:1 to 7.3:1
- Christie Twist™ 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 ChristeNET™.

▼ Three Mirage Series projectors are at 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

The Christie Mirage Series provides 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 1600-2000:1 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 7.3:1 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.

CHRISTIE®

Christie Twist™ is a powerful, easy-to-use tool to manage arrayed projectors that allows users to display virtually any image, anywhere.

This tool allows for pixels to be mapped to any projection surface with proper geometry and perfect pixel-to-pixel alignment. Christie Twist™ provides the enhanced warping and expert blending required for arrayed projectors to operate as a single, uniform display.

▲ 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 Silicon Graphics, Inc. (SGI) 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.

Christie Twist™ – total image control

Christie Twist™ is a dedicated, purpose-built hardware and software solution that enables full image warping and advanced edge-blending through the control of a powerful and easy-to-use Graphic User Interface. Users can expertly control seamless, multiple edge-blended, curved images. Images can be warped to fit virtually any projection surface – flat, curved or spherical screens – with perfect pixel-to-pixel alignment.

The internal hardware module is integrated into the 10-bit image processing module. Latency is typically as low as 10-20 lines. Once the warping and blending grids are set for multiple projectors, the properties will be stored on the projectors and on the external PC. Multiple blend and warp properties can be stored on the projectors – providing easy access and immediate recall of settings.

As an additional optional software upgrade, Christie Twist™ Pro is a single license that supports an unlimited number of projectors per array and an unlimited and arbitrary number of grid lines, up to and beyond a 10' x 10' grid. Christie Twist™ Pro features advanced edge-blending, with rotate and flip capabilities, a gradient preview of edge-blends and a brightness uniformity controller.

Brightness uniformity control

Adjusts center-to-edge brightness uniformity across the image – with the Christie Mirage Series you can achieve up to 90% uniformity.
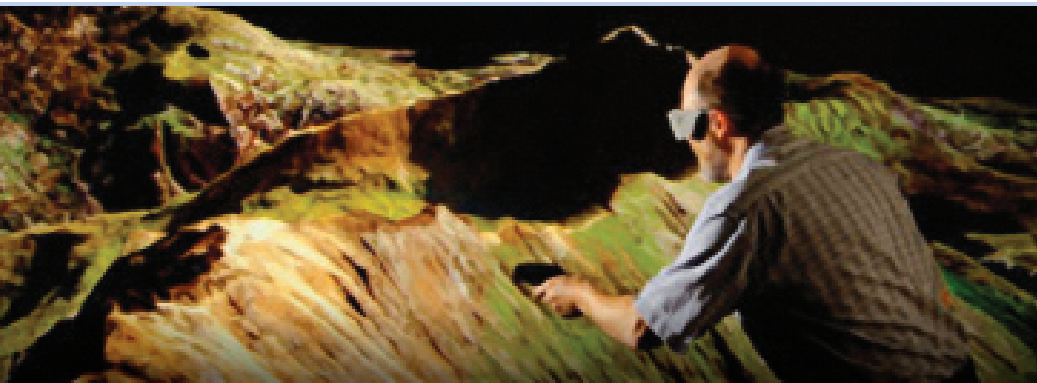
Dark Interval Adjustment (DIA™)

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.

Competitive advantages

- Higher resolution – SXGA+ – 1400 x 1050, HD – 1920 x 1080 or WUXGA – 1920 x 1200
- Twice the contrast (1600-2000:1)
- Internal scaling of stereo signals
- Internal warping and enhanced edge-blending module option with Christie Twist™
- Built in ChristieNET™ for networking and control
- First and only full HD 1920 x 1080 3D projectors
- Mirage S+ series supports up to 120Hz active stereo
- Mirage HD and WUXGA series projects up to 120 Hz active stereo without requiring ultra-high bandwidth
- Stereo video capable with optional HD-SDI input module on Mirage HD and WUXGA series

◄ When Christie first announced their Mirage S+4K projector, VR specialists Virtalis 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.

CHRISTIE®

	SXGA+ (1400 x 1050) – 3-chip, 0.95" DMD		
	Mirage S+3K	Mirage S+6K	Mirage S+14K
Brightness	3000 ANSI (±10%)	6500 ANSI (±10%) @ 200-240 VAC 5500 ANSI (±10%) @100-120 VAC	16,000 ANSI (±10%)
Contrast	1500-2000:1 full on/off 450:1 ANSI	1500-2000:1 full on/off 450:1 ANSI	1600-2000:1 full on/off 450:1 ANSI
Weight	75lb (34kg)	75lb (34kg)	160lb (73kg)
Shipping weight	120lb (54kg)	120lb (54kg)	230lb (104kg)
Size (LxWxH)	22.3 x 26.0 x 12.3" (566 x 660 x 313mm)	22.3 x 26.0 x 12.3" (566 x 660 x 313mm)	32.1 x 24.9 x 15.1" (815 x 631 x 384mm)
Lamp type	500W CERMAX® Xenon	1.0kW CERMAX® Xenon	2.4kW Xenon
Lamp life	1500 hrs (typical)	1500 hrs (typical)	750 hrs (typical)
Power VAC	100-240 VAC @ 50/60Hz	100-200 VAC @ 50/60Hz	200-240 VAC @ 50/60Hz
Power consumption	1000W max	1600W max	4000W max
Thermal dissipation	3412 BTU/hr	5640 BTU/hr	13,648 BTU/hr
Operating current	10A @ 100 VAC 5A @ 200 VAC	12A @ 100 VAC 8A @ 200 VAC	20A @ 200 VAC

Digital Color Management (DCM™)

The Christie Matrix Series comes standard with a specially designed optical system with a very tight ± 5nm tolerance for primary colors, making multi-channel adjustments between multiple projectors easy to accomplish.

Color Temperature Control (CTC™)

Provides the flexibility to adjust color temperature with a range from 3200K – 9300K.

Custom Gamma Adjustment (CGA™)

Offers full control of gamma curves, as well as white, black and grey levels to ensure digitally accurate colors and greyscale tracking.
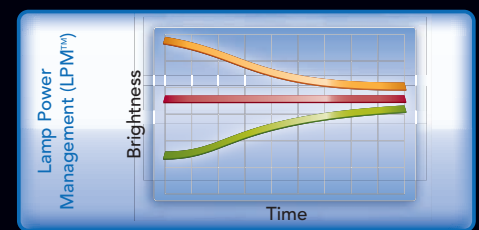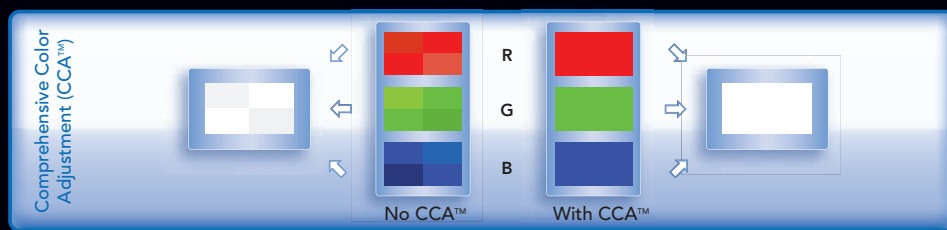
Comprehensive Color Adjustment (CCA™)

Provides individual RGB color matching for multi-channel applications to eliminate color variations across multiple screens for uniform, color-matched projector arrays.

Super CR™ contrast ratio

With the internal variable contrast aperture, contrast ratios range from 1500-5000:1 for vivid, dynamic image reproduction and low black levels for accurate night-scenery mode.

Spatial Light Image Construction (SLIC™)

The Christie Matrix Series manufacturing ensures high-quality convergence and registration between red, green and blue DMDs.

Comprehensive Color Adjustment (CCA™)

R
G
B

No CCA™   With CCA™

Lamp Power Management (LPM™)

Brightness

Time

■ Natural lamp brightness   ■ Contrast regulated brightness
■ Lamp power

▲ The Christie Mirage Series offers unique features that provide the ultimate control and stunning image quality.

WUXGA (1920 x 1200) – 3-chip, 0.96" DMD (Also available in HD (1920 x 1080) – 3-chip, 0.95" DMD - HD3, HD6, HD12 and HD18)			
Mirage WU3	Mirage WU7	Mirage WU12	Mirage WU18
3000 ANSI (±10%)	6600 ANSI (±10%) @ 200-240 VAC 5600 ANSI (±10%) @ 100-120 VAC	12,000 ANSI (±10%)	18,000 ANSI (±10%)
1500-2000:1 full on/off 450:1 min ANSI	1500-2000:1 full on/off 450:1 min ANSI	1500-2000:1 full on/off 1300:1 min ANSI	1500-2000:1 full on/off 1300:1 min ANSI
75lb (34kg)	75lb (34kg)	140lb (64kg)	160lb (73kg)
120lb (54kg)	120lb (54kg)	165lb (75kg)	230lb (104kg)
22.3 x 26.0 x 12.3" (566 x 660 x 313mm)	22.3 x 26.0 x 12.3" (566 x 660 x 313mm)	32.1 x 24.5 x 15.1" (814.8 x 631.4 x 384mm) (excludes lens, feet, stacking points)	32.1 x 24.5 x 15.1" (814.8 x 631.4 x 384mm) (excludes lens, feet, stacking points)
500W CERMAX® Xenon pre-aligned lamp module	1.0kW CERMAX® Xenon pre-aligned lamp module	2.0kW CERMAX® Xenon pre-aligned lamp module	3.0kW CERMAX® Xenon pre-aligned lamp module
1500 hrs (typical)	1500 hrs (typical)	1000 hrs (typical)	750 hrs (typical)
100-240 VAC ±10% @ 50/60 Hz	100-240 VAC ±10% @ 50/60 Hz	200-240 VAC ±10% @ 50/60 Hz	200-240 VAC @ 50/60 Hz
1000W max	1600W max	3000W max	4800W max
3412 BTU/hr	5460 BTU/hr	10,236 BTU/hr	16,390 BTU/hr
10A @ 100 VAC 5A @ 200 VAC	10.4A @ 100 VAC 8A @ 200 VAC	15A @ 200 VAC	24A @ 200 VAC

Lamp Power Management (LPM™)

Provides users with the ability to adjust power to the lamps for a consistent and uniform brightness, to monitor and manage the lamp operation in the display. Brightness adjustments can be made from center to edge across the image up to 100% uniformity.

Lenses

Available on all projectors. Fixed and zoom ranging from 0.67:1 to 7.3:1.

Regulatory approvals
(applicable to all projectors)

These products conform to the following regulations related to product safety, environmental requirements and electromagnetic compatibility (EMC):

• FCC Part 15, Subpart B Class A
• CISPR22/EN55022
• CISPR24/EN55024
• UL 60950-1 first edition
• CAN/CSA-C22.2 No 60950-1-03 first edition
• IEC60950-1:2001
• CCC*
• 2002/95/EC RoHS

Build to Order

Several of our models will be available on a build to order basis.

For details, please contact your Christie sales representative.

For full product specifications, please visit our website: christiedigital.com

* Some models still pending CCC approvals – contact your Christie sales representative.

▶ Christie has designed and installed a custom, fully immersive Christie TotalVIEW™ CAVE at the renowned Discovery World in Milwaukee at Pier Wisconsin, that offers an "interactive glimpse into the future" to educate and entertain. Dubbed by Discovery World as Human Interactive Virtual Education (HIVE), the immersive 3D environment allows visitors a "near-real" experience of life around them by placing them in the middle of virtual, three-dimensional worlds that are breathtakingly lifelike, and provide for an interactive and educational "3D walk-through" of the museum's latest and most innovative concepts.

CHRISTIE®

Corporate offices

Christie Digital Systems USA, Inc
USA – Cypress
ph: 714 236 8610

Christie Digital Systems Canada, Inc.
Canada – Kitchener
ph: 519 744 8005

Independent sales consultant offices

Spain
ph: +34 91 633 9990

Italy
ph: +39 (0) 2 9902 1161

South Africa
ph: +27 (0) 317 671 347

Worldwide offices

United Kingdom
ph: +44 (0) 118 977 8000

Germany
ph: +49 2161 664540

France
ph: +33 (0) 1 41 21 44 04

Eastern Europe and
Russian Federation
ph: +36 (0) 1 47 48 100

Dubai (United Arab Emirates)
ph: +971 (0) 4 299 7575

India
ph: (080) 41468941 – 48

Singapore
ph: +65 6877 8737

China (Shanghai)
ph: +86 21 6278 7708

China (Beijing)
ph: +86 10 6561 0240

Japan (Tokyo)
ph: 81 3 3599 7481

Korea (Seoul)
ph: +82 2 702 1601

For the most current specification information, please visit www.christiedigital.com

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