



# REALiS 4K500ST

4K LCOS PROJECTOR

**4K**  
RESOLUTION.  
COMPACT  
SIZE.





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The REALiS 4K500ST brings true-to-life 4K resolution to the top of Canon's LCOS projector line. It combines Canon's LCOS Technology with AISYS-enhancement, and advanced Genuine Canon optics, to set a new standard in detail and clarity within a compact and lightweight design.

- **4K Resolution (4096 x 2400):** Higher than 4K Digital Cinema Initiative (DCI) 4096 x 2160, and Quad Full High Definition (QFHD) 3840 x 2160 resolutions.
- **5000 Lumens\* with up to 3000:1 Contrast Ratio:** Deep black levels and bright whites create content with outstanding depth and dimension.
- **Genuine Canon Optics:** Specialized 4K short focus wide zoom lens produces virtually distortion-free 4K resolution projection with consistent brightness maintained at virtually every distance.
- **Compact and Lightweight Size:** Offers unique installation opportunities and flexibility.
- **Powerful Dual Video Engines:** Uncompressed 4K 60 fps video playback, and optimal image upscaling to help maximize the quality of non-native 4K resolution content.

\* When in Presentation Mode and lamp is set to Full Power Mode.

## SIMULATION & TRAINING

Immersive video, reduced motion blur and a fast response rate provide highly realistic scenarios for effective simulation and training. A compact size helps to ensure a suitable fit in a variety of spaces.

### Canon 4K Brings True Detail and Realism to Audiences All in a Compact Size

Ultra-high 4K resolution and cutting-edge Canon optical technology make the REALiS 4K500ST LCOS projector an ideal choice for a variety of applications that demand highly detailed, precise images. From simulation and training to museums and galleries, it provides images and video that closely replicate real world experiences.

#### RECOMMENDED APPLICATIONS



Simulation & Training

Museums & Galleries

Design & Engineering

Medical Education & Training

# CANON 4K PROJECTION. A NEW DIMENSION IN DETAIL.

## Native 4K Resolution (4096 x 2400)

Eye-opening 4K resolution produces incredibly detailed, high-impact images that are much sharper and more true to life than lower resolutions.

At 4096 x 2400, Canon's 4K resolution generates a bigger, richer picture made up of more than 9.8 million pixels – higher than the Digital Cinema Initiative (DCI) standard for 4K cinema (4096 x 2160) and more than QFHD (3840 x 2160), the resolution standard for 4K TV. When compared to popular Full HD (1920 x 1080), the 4K500ST produces more than four times the detail.

This high resolution can help military, flight and other simulators produce highly accurate video and images with a wide depth-of-field to get as close as possible to a real life experience.

Canon 4K (4096 x 2400)



DCI (4096 x 2160)

QFHD (3840 x 2160)

Full HD (1920 x 1080)

# REALISTIC "LIFE-LIKE" IMAGES, ALIVE WITH DETAIL

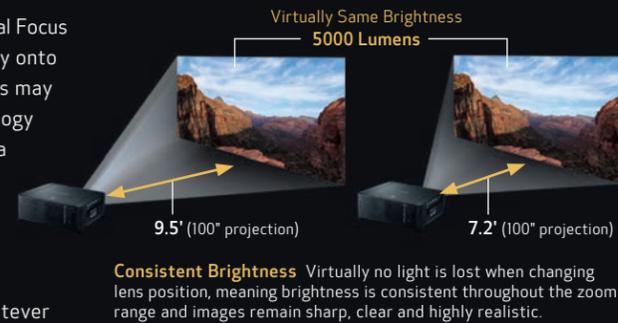
## Genuine Canon Optics

Drawing on Canon's advanced optical expertise, the specialized 4K short focus wide zoom lens projects virtually distortion-free 4096 x 2400 resolution images. A throw ratio of 1.0–1.3:1 means a 10 foot wide image can be projected from an approximate distance of only 10 feet away.

The design includes the same bold red ring around the lens barrel as Canon's renowned L-series EF camera lenses, which are highly regarded among professional photographers as many of the industry's finest. The lens itself features a multitude of sophisticated Canon technologies, such as dual-sided aspherical lens elements as well as Ultra Low Dispersion (UD) lens elements. These elements significantly reduce chromatic aberration, curvilinear distortion, ghosting and flare to create sharp and clear images in a compact size.

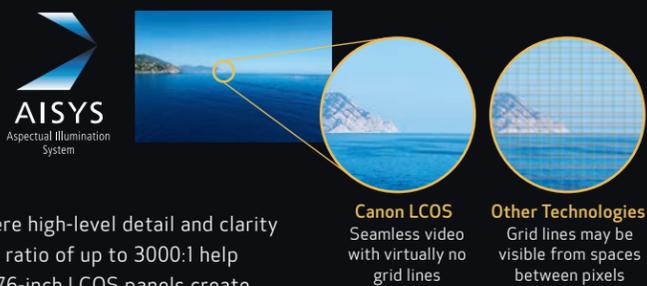
A deep depth of focus at F2.6 as well as a new Marginal Focus feature allow images to be rendered highly accurately onto a variety of curved surfaces. Where other projectors may distort or bow at the edges, Canon's optical technology keeps the image periphery extremely straight with a significantly low TV distortion. This results in beautiful images with smooth edges.

Brightness remains virtually consistent at 5000 lumens throughout the 1.3x zoom range, resulting in images that remain clear, strong and color-true whatever the projection distance.



## Next Generation LCOS Technology with AISYS-enhancement

Canon's advanced AISYS Optical Engine (Aspectual Illumination System) maximizes the light source and performance of the LCOS (Liquid Crystal On Silicon) panels to produce high resolution, high brightness and high contrast. Where high-level detail and clarity is vital, 5000 lumens of brightness and a contrast ratio of up to 3000:1 help provide a high-quality image. In addition, three 0.76-inch LCOS panels create smooth, natural video and images with a fast response time when compared to other projection technologies. The result is an immersive 4K resolution picture with crisp detail and true-to-life color.



## MUSEUMS & GALLERIES

Large, dramatic displays and panoramas can be created using the built-in Edge Blending function of multiple projectors. Accurate color reproduction and professional adjustment options help to amplify the impact by providing faithful images that can suit specific imaging needs.

## Enhanced Image Processing Technologies

Canon's advanced, powerful dual image processing engines produce exceptional video playback. The engines also incorporate a variety of features available to help enhance the quality of still and motion images, making them more realistic and impactful.

- **Video Playback (4K 60p, 4K 30p):** Smoothly reproduces uncompressed 4K video at 60 or 30 frames per second for a natural, fluid feel and highly detailed, true-to-life content.
- **Upscaling:** Non-4K content can be displayed by utilizing two scaling functions of BiCubic and Canon's Shape Trace – which can detect contours of an image in a diagonal direction and performs interpolation, resulting in a stunningly smooth image.
- **Dynamic Gamma:** When applied, this feature analyzes individual areas of the image for specific, independent contrast adjustment so light and dark areas do not appear over or under exposed.
- **Memory Color Correction:** This Canon technology can be used to enhance skin tones and other color features for rich, vivid results that look striking to the human eye.



## Motion Blur Reduction Function

Advanced image adjustments include Canon's latest Motion Blur Reduction feature\*\* for improved visibility when movement is fast. By inserting extra frames to video content, motion blur is reduced and the clarity of graphics and text on fast-moving objects is preserved. Three different modes (Strong, Low and Off) are included for flexibility, with each depending on the level of movement and type of video content.



## Low Frame Delay

Effective simulation and training depends on realistic video with 'low latency' – images that refresh as quickly as possible with minimal lag time. A relatively small frame delay helps to create an immersive, life-like experience. Response times are fast, so if a trainee pilot activates a cockpit control, for example, the corresponding video picture will respond quickly for a real-life look and feel.

\*\* When motion blur reduction is activated brightness will be affected.

# CANON CLARITY AND QUALITY IN A COMPACT, FLEXIBLE PACKAGE



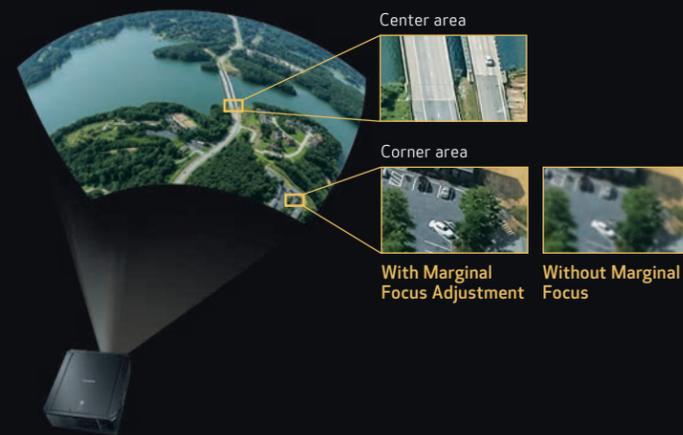
Size: 18.5" (W) x 6.9" (H) x 21" (D), Weight: 38.8 lbs.

## Significantly Compact and Lightweight Design

Canon's cutting-edge optical design achieves 4K resolution and 5000 lumen brightness within an incredibly compact projector size. The innovative AISYS Optical Engine makes this possible by independently controlling light in both vertical and horizontal directions to achieve both high brightness and contrast. Combined with the small size of the LCOS panels (just 0.76 inches), the projector is incredibly compact while delivering outstanding performance. At a height of 6.9 inches, width of 18.5 inches and weight of 38.8 pounds, it's smaller and lighter than many others.

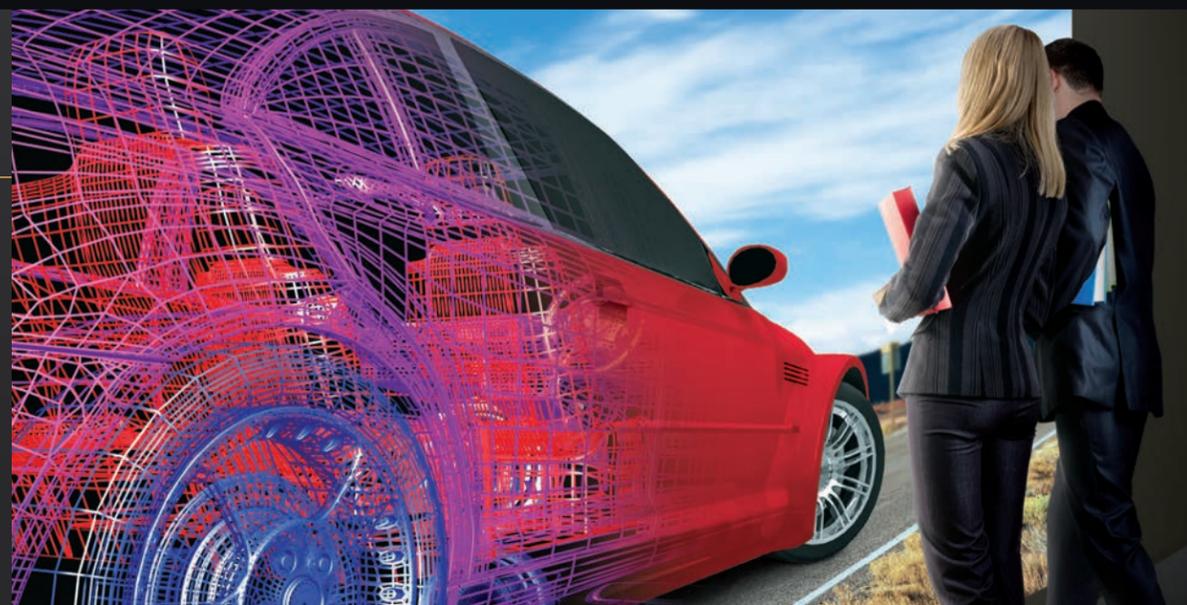
## Marginal Focus

The Marginal Focus feature helps to ensure that images projected onto a spherically domed surface are kept in focus right up to the very edges. With the 4K500ST, the built-in marginal focus allows for adjustment of focus on domed screens.



## DESIGN & ENGINEERING

Bring CAD designs, drawings and plans to life with stunning 4K precision detail. Virtually seamless images with low distortion will make content jump off the screen, and Canon's new Marginal Focus feature will help maintain optimal focus to the very edges on spherically domed surfaces.



## MEDICAL EDUCATION & TRAINING

The built-in DICOM Simulation Mode<sup>◇</sup> (Blue Base and Clear Base) optimizes the viewing of medical images such as X-Rays and CAT Scans. Combining this with 4K resolution makes the 4K500ST well-suited for medical images in non-diagnostic settings such as lectures, academic meetings or hospital conferences.

## Advanced Professional Settings

A variety of advanced installation settings provide added customization options for challenging installation areas.

- **Motorized Lens Shift (V: ±60%, H: ±10%)**: Makes it possible to easily adjust the vertical and horizontal positioning of the projected image.
- **4-point Keystone Correction**: Allows the corners of the image to be independently adjusted to help ensure optimal image reproduction.
- **Built-in Edge Blending**: Enables the projection of one seamless, large image from multiple projectors without the need of special software.
- **Advanced Registration**: Allows independent position adjustment of the three primary colors (RGB) with high accuracy (0.1 pixel) ultimately reducing blurred colors or lines often projected at the edge of an image.



## 360-degree Vertical Installation

360-degree projection<sup>◇◇</sup> allows the projector to be positioned anywhere on the vertical axis. Fan speed can also be adjusted to help optimize results (depending on projector positioning).



## Versatile Connectivity

Generous industry-standard connectivity on the 4K500ST includes four DVI inputs and two HDMI inputs that permit various input options such as supporting single, stripe and cross configurations.

## Crestron and AMX Device Compatibility

For extra control and seamless integration into existing systems, the projector is compatible with Crestron Room View, AMX Device Discovery, PLink and others.

## Multiple Image Modes

Select from six different pre-set image modes, as well as three customizable image modes, to help to best optimize quality based on content type and projection environment. Pre-set image modes are:

**Standard**: Ideal for bright rooms, and when using content from computer screens or motion picture content.

**Dynamic**: Ideal for rooms that are somewhat bright, and when showing motion picture content.

**Video**: Ideal for rooms that are somewhat dark, and for video content.

**Presentation**: Ideal for somewhat bright rooms when text needs to be clear, such as when part of a video presentation.

**Photo/sRGB**: Ideal for projecting images from sRGB-supported digital cameras.

**DICOM Simulation Mode<sup>◇</sup>**: Ideal for displaying medical images in non-diagnostic settings. Both Blue Base and Clear Base settings are supported.

## Peace of Mind

The 4K500ST is backed by the Canon 3-Year Projector and Lamp Limited Warranty (120 day lamp coverage), and the company's award-winning Professional Service & Support which includes a 3-Year Advanced Warranty Service Exchange Program and a Service Loaner Program.

<sup>◇</sup> The REALiS 4K500ST is not cleared or approved for medical diagnosis and should not be used for these purposes.  
<sup>◇◇</sup> When standing the projector straight up or down, lamp life may be shortened.

## SPECIFICATIONS

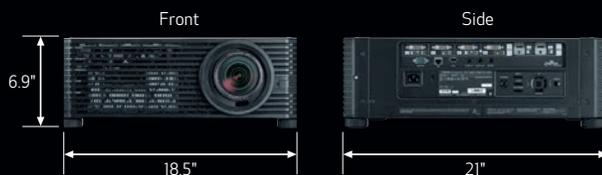
PROJECTION SYSTEM	
Imaging Device	0.76" LCOS Panel x3
Aspect Ratio	17:10 Approx. (128:75)
Native Resolution	4096 x 2400
Brightness <sup>1,2,3</sup>	5000 Lumens (Full Power) / 3750 Lumens (Power Saver)
Contrast <sup>3</sup>	3000:1 (Full white, full black; Presentation Mode)
Image Size	40 – 600"
Digital Keystone	V:±20°, H:±20°
F Number, Focal Length	F2.6, f=17.2 – 22.3mm
Uniformity	88%
Zoom Ratio	1.3x
Throw Ratio <sup>4</sup>	1.0 – 1.3:1
Focus	Powered
Lens Shift	V: ±60%, H: ±10% (Powered)

IMAGE ADJUSTMENTS	
Image Mode	Standard / Presentation / Dynamic / Photo/sRGB / Video / DICOM SIM / User 1 / User 2 / User 3
Color Adjustment	Color Level, Color Balance, Color Temperature, Gain (R,G,B), Offset (R,G,B)
Screen Color Correction	Normal / Greenboard / Adjust (custom)
Mounting	360° projection
Adjustable Feet	Four locations at bottom. Extension length = 0.47"

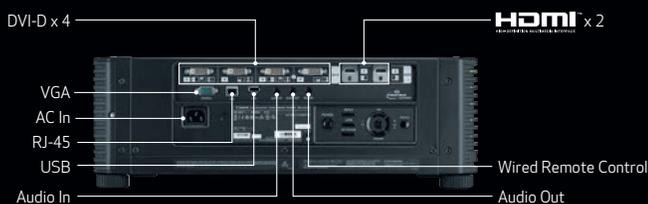
TERMINALS	
DVI-D	Digital PC Input (x4)
HDMI	Digital PC / Digital Video Input (x2)
RJ-45	Network Connection (1000BASE-T / 100BASE-TX / 10BASE-T)
Dsub9 (Control)	RS-232C Connection
USB Type A	USB Connection
Mini Jack (Audio)	Audio Input (x1) / Audio Output (x1)
Mini Jack (Remote)	Wired Remote Control Connection

REMOTE CONTROL	
Wireless Remote	Yes

## DIMENSIONS



## CONNECTABILITY



<sup>1</sup> When in Presentation Mode. <sup>2</sup> Lamp mode is Full Power/Power Saver. Brightness in Power Saver Mode is only a calculated value, and is not guaranteed as specification. <sup>3</sup> Compliance with ISO21118-2012. <sup>4</sup> Calculated value for 70" image. <sup>5</sup> Only low frequencies (24 – 30 Hz) are supported. <sup>6</sup> EDID is not supported. <sup>7</sup> Supported when "Panel drive mode" is set to "4096 x 2400."

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4K500ST ITEM CODE: 0961C002 UPC CODE: 013803266467

IMAGE SIGNALS	
Scanning Frequency	H: 18,000 kHz – 149,096 kHz, V: 23,956 Hz – 60,000 Hz
HDMI (Single)	4096 x 2160 <sup>5</sup> / 3840 x 2160 <sup>5</sup> / 2560 x 1600 / 2560 x 1440 / 2048 x 1200 / 1920 x 1200 / 2560 x 1080 / 2048 x 1080 / 1920 x 1080 / 1280 x 1024 / 1440 x 900 / 1366 x 768 / 1024 x 768 / 1280 x 720 / 800 x 600 / 720 x 576 / 720 x 480 / 640 x 480
HDMI (1 x 2)	3840 x 2400 <sup>6,7</sup> / 3200 x 2400 <sup>7</sup> / 4096 x 2160 / 3840 x 2160 / 2560 x 1600 / 3840 x 1080 / 2560 x 720 / 1440 x 576 / 1440 x 480 / 1280 x 480
DVI (Single)	4096 x 2160 <sup>5,6</sup> / 3840 x 2160 <sup>5,6</sup> / 2560 x 1440 / 2048 x 1200 / 1920 x 1200 / 2560 x 1080 / 2048 x 1080 / 1920 x 1080 / 1280 x 1024 / 1440 x 900 / 1366 x 768 / 1024 x 768 / 1280 x 720 / 800 x 600 / 640 x 480
DVI (1 x 2)	4096 x 2160 <sup>5</sup> / 3840 x 2160 <sup>5</sup> / 2560 x 1600 / 2560 x 1440 / 2560 x 1080
DVI (2 x 2)	4096 x 2400 <sup>7</sup> / 3840 x 2400 <sup>7</sup> / 3200 x 2400 <sup>7</sup> / 4096 x 2304 <sup>5</sup> / 4096 x 2160 / 3840 x 2160
DVI (1 x 4)	3840 x 2400 <sup>7</sup> / 3200 x 2400 <sup>7</sup> / 4096 x 2304 <sup>5</sup> / 4096 x 2160 / 3840 x 2160
Dot Clock	297.00 MHz (Maximum)

BUILT-IN SOUND	
Internal Speaker	5W, Monaural

LAMP	
Type	250-NSHA
Life <sup>2</sup>	3000 Hours (Full Power) / 4000 Hours (Eco)
Lamp Power <sup>2</sup>	400 / 300W

RATINGS	
Fan Noise <sup>2</sup>	39 / 34dB
Power Consumption <sup>2</sup>	600 / 470W
Standby Power <sup>5</sup>	0.8 / 0.4W
Power Voltage	AC 100 – 240V, 50 / 60 Hz
Operating Temperature	32°F – 104°F (0°C – 40°C, 20%RH – 85%RH)
Storage Temperature	14°F – 140°F (-10°C – 60°C)
Dimensions (W x H x D)	18.5" x 6.9" x 21"
Weight <sup>7</sup>	38.8 lbs.

## WHAT'S IN THE BOX

- Projector
- Lens Cap
- Power Cord
- Projector Remote Control RS-RC05 (includes two AA batteries)
- Important Information (book)
- User's Manual (CD-ROM)
- Warranty Card

## ACCESSORIES

ITEM	ITEM CODE
Remote Control RS-RC04	4970B001
Projector Remote Control RS-RC05 (same as supplied)	5750B001
Replacement Lamp & Air Filter RS-LP10F	1286C001
Replacement Air Filter RS-FL03	0963C001
Ceiling Attachment RS-CL15	0964C001
Ceiling Pipe (400 – 600mm) RS-CL08	3096B001
Ceiling Pipe (600 – 1000mm) RS-CL09	3097B001



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