

MATRIX™ WQ STIM AND MATRIX™ WQ SIM HIGH FIDELITY PROJECTORS

THE BRIGHTEST IS NOW BRIGHTER

Most true-to-life WQXGA image quality

The Collins Matrix™ WQ StIM and Matrix™ WQ SIM high fidelity projectors offer years of virtually maintenance-free, continuous operation – now with higher brightness. Designed with features that minimize total cost of ownership, both solid-state projectors take reliability and stability to the next level.

Their Texas Instruments (TI) DLP® technology provides unmatched picture reliability, filter-free design and no color wheel for high reliability. One advantage of this system is that it offers better color

control in any image, since each individual pixel is controlled. The result is a smoother, cleaner image.

Exceptionally bright LEDs, Widescreen Quad Extended Graphics Array (WQXGA) resolution, 120Hz operation, advanced smear-reduction technology and real-time balancing of color and brightness levels enable the Matrix WQ StIM to deliver the highest-fidelity image quality in the simulation industry.

When combined with our EP®-8100 image generation system, the WQ StIM projector is the only visual solution that operates on a single channel for independent control of both infrared and out-the-window visuals.

KEY FEATURES AND BENEFITS

- Integrated, fast LED illumination with a lifetime >50,000 hours
- No consumables – Lamp-less operation delivers longer life and greater reliability at a lower cost of ownership compared with projectors that use lamps
- Solid-state technology with a single digital micromirror device (DMD™), providing unmatched picture reliability in a filter-free design
- No color wheel for high reliability
- Increased color gamut for more dynamic and realistic rendering of the training environment
- Unlimited mounting options – Removes lamp restrictions for mounting in any orientation
- Ruggedized motion platform kit – Withstands 5g shock load

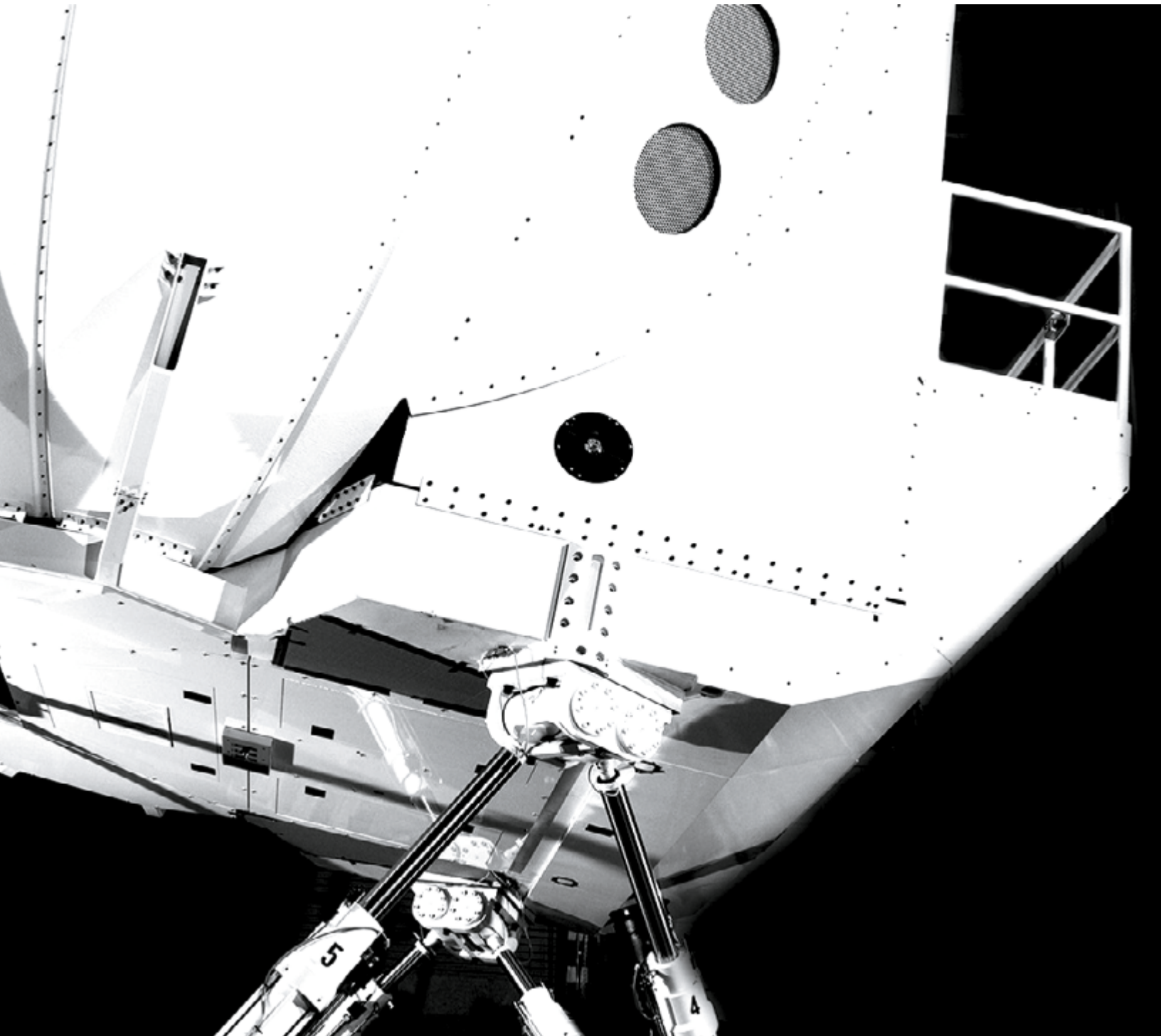


Years of reliable operation with low life-cycle costs

The WQ StIM accurately depicts day and night scenes and independent, stimulated night-vision-goggle images. In addition to its outstanding quality, the Matrix WQ StIM is a cost-effective choice. Its stable, long-life platform offers a lamp-less illumination system for years of reliable, continuous operation with virtually no maintenance costs. Its low power consumption directly translates to lower operating heat, fewer cooling requirements and cost savings in electricity.

Built on the same stable, long-life illumination platform as the Matrix WQ StIM, our Matrix WQ SIM projector offers many of the same design features for use in training applications that don't require night-vision-goggle stimulation.

The projector is engineered for flight simulation requirements. It exceeds FAA Level D compliance for projectors and full-flight simulators, providing the finest image quality in the simulation industry.



SPECIFICATIONS

Matrix WQ StIM (2560 x 1600) WQXGA solid-state illumination, dual input, RGB and IR (part number 130-002103-04)

Matrix WQ SIM (2560 x 1600) WQXGA solid-state illumination, single input, RGB (part number 130-003104-04)

Image	Brightness ¹	<ul style="list-style-type: none"> • 995 lumens with 0.68:1 lens • 995 lumens with 0.80:1 lens 	<ul style="list-style-type: none"> • 850 lumens with 1.29-1.71:1 lens • 935 lumens with 1:1 lens
	Contrast	10,000:1 dynamic contrast (under LED control); no mechanical iris required	
	Uniformity	95% brightness and color uniformity after electronic adjustment	
Display technology	Type	Revolutionary solid-state projector using a single TI Darkchip™ 3 DMD with a solid-state illumination engine (no color wheel) and sealed optics	
	Native resolution	2560 x 1600 WQXGA	
	Output frame rate	60 Hz or 120 Hz	
Input	Signal format	2560 x 1600 WQXGA (VESA RB)	
	Input frame rate	60 Hz with single input or 2 x 60 Hz with dual input	
Inputs	2 x dual-link DVI-D or 1 x dual-link DVI-D		
Optical system	Lens mount	Mechanical, horizontal and vertical lens shift; no shutter required; no iris required – user-programmable illumination parameters (eliminates the need for a mechanical shutter)	
	Illumination	<ul style="list-style-type: none"> • Solid-state illumination; illumination lifetime greater than 50,000 hrs. (to 50% output) • Full-spectrum RGB+IR 	
	Christie® ArrayLOC™	Manages the brightness and color levels of all projectors within an array to a common level, in real time with no additional latency	
Lenses	Fixed	.68:1 fixed; 0.80:1 fixed; 1:1 fixed; all optimized for IR and visible light	
	Zoom	1.28-1.71:1 zoom, optimized for IR and visible light	
	Offsets ²	0.68:1 lens features ±5% (horizontal) and ±15% (vertical) offset when mounted in landscape orientation; 0.80:1 lens features +100%/-60% (horizontal) and +150%/-100% (vertical) offset when mounted in landscape orientation ² ; 1.28-1.71:1 lens features +100%/-60% (horizontal) and +150%/-100% (vertical) offset when mounted in landscape orientation ³	
Enhanced feature sets	<ul style="list-style-type: none"> • Minimum processing latency; auto power up; menus in five languages • Simultaneous, independent display of both visible light and infrared projection; dual-channel compositing modes, including RGB+IR and 120 Hz RGB interleaved video • Christie® AutoCal™ – Uses cameras to map an array of projectors on a display screen and calibrate geometry and blending • Christie® AccuFrame™ – Provides smear reduction technology; fully adjustable in 1% increments • Christie® AccuFrame™ Pro – Provides industry-leading smear reduction techniques • Christie ArrayLOC – Automatic, continuous management of brightness and color space levels of all projectors in an array to common levels in real time • Christie® Twist™ – Provides non-linear image mapping for warping on a display screen, edge blending, intensity and color uniformity 		

SPECIFICATIONS (CONT.)

Power requirements	Operating voltage	100-240 VAC 50/60 Hz
	Operating current	10A max. (lower in normal operational modes)
	Dissipation	2316 BTU/hr. max. (lower in normal operational modes)
Physical	Size (L x W x H): 16 x 15.75 x 15.75" (406 x 400 x 400 mm) (without lens)	Weight 88 lbs. (40 kg) (without lens)
Environment	Temperature 40-95° F (5-40° C)	Humidity 20-80% non-condensing
Orientation	Portrait and landscape	
Warranty	Standard warranty: two years parts and labor; extended warranty options available – contact Collins Aerospace for details	

¹ For information on brightness with AccuFrame, contact Collins Aerospace.

² Each offset is specified with the other at zero. Simultaneous horizontal and vertical offsets may limit the adjustment range of each.

³ Matrix WQ StIM and Matrix WQ SIM are both available with a ruggedized motion platform kit. These are built to interface with customers' motion platform structures and are available on a build-to-order basis. For details, please contact your Collins Aerospace sales representative.

Specifications subject to change without notice.

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