Chesapeake Energy Arena, Home of the Oklahoma City Thunder

Superior visual performance and mission-critical reliability

The Clarity® Matrix LCD Video Wall System with G2 Architecture is the ultimate video wall solution for applications seeking the very best visual performance and flexibility to accommodate the most mission-critical needs.
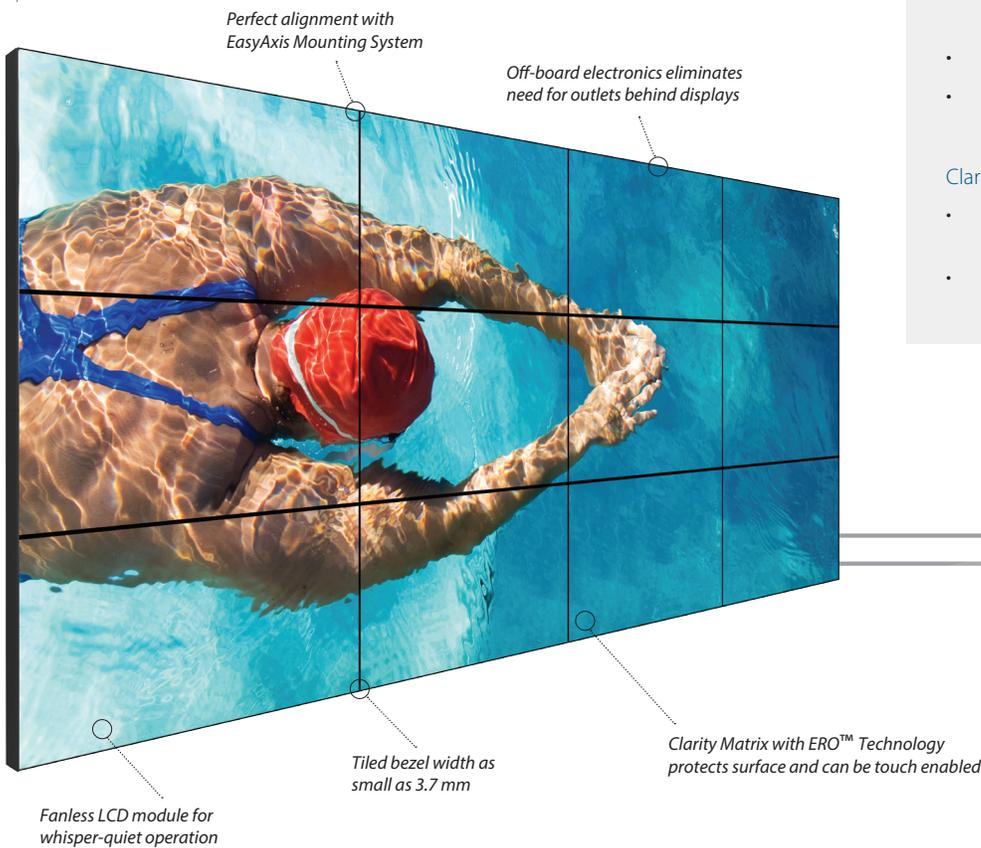
Planar's unique design approach optimizes the thinnest bezel LCD in the industry for 24x7 operation, minimizes installation depth and simplifies design, installation and service of the video wall. With a tiled bezel width as small as 3.7mm, the LCD video wall system includes Planar's integrated EasyAxis™ Mounting System and G2 off-board electronics and power supply architecture, reducing total cost of ownership while delivering the most reliable LCD video wall.

Unique Architecture and Benefits by Design

The Clarity Matrix LCD Video Wall System was designed and developed by display industry experts to address the challenges faced by all video wall installations: mounting and alignment, reliability and extended operation, service and maintenance access and simple, effective image processing and management.

G2 At the heart of Clarity Matrix with G2 Architecture is a distributed design that takes heat, complexity and potential points of failure off the LCD panel and places it with a centrally located, easily accessible and highly reliable rack-mounted system.

Perfect alignment with EasyAxis Mounting System

Off-board electronics eliminates need for outlets behind displays

Fanless LCD module for whisper-quiet operation

Tiled bezel width as small as 3.7 mm

Clarity Matrix with ERO™ Technology protects surface and can be touch enabled

Now supports cable lengths of 500ft with no additional hardware

Power supply module can drive as many as 8 displays

Most Comprehensive Line-up

The Clarity Matrix family is a complete line up of LCD video wall sizes and options to suit the needs in a wide variety of video wall applications.

Clarity Matrix

- 46" and 55"
- Two brightness levels available
- Tiled bezel width as small as 3.7 mm

Clarity Matrix with Extended Ruggedness and Optics (ERO™) Technology

- Optically-bonded, vandal-resistant protective glass for increased ruggedness and durability

Clarity Matrix MultiTouch

- Turn-key modular touch kit adds interactivity and collaboration
- Choice of 6 or 32 simultaneous touch points
- Incorporates Planar's ERO technology

Clarity Matrix 3D

- Spectacular 2D and 3D viewing experience for professional 3D visualization applications
- Flicker-free stereoscopic visualization with passive glasses

Flexible built-in windowing capability

Big Picture Plus Processing

Clarity Matrix supports a wide range of processing options to display sources on the video wall. Planar's Big Picture Plus processing is built into Clarity Matrix and allows sources to be scaled across the entire video wall or any section of the video wall. To simplify set-up of Big Picture Plus, Clarity Matrix has position sensors built into the LCD that determine where it is located within the array and scale the sources across the video wall automatically, saving hours of set-up. Big Picture Plus processing also allows for ultra-high resolution content, up to 4K, to be spread over multiple displays at native resolution. For more complex configurations, Clarity Matrix supports all leading image processing and digital signage software solutions including Planar's Indisys™ and Clarity® VCS image processing solutions.
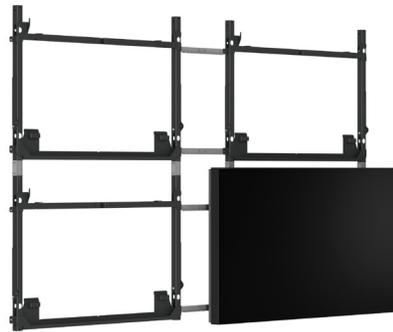
Superior Visual Performance

You know when you see a Clarity Matrix video wall because it looks stunning, is perfectly aligned and has the thinnest mounted depth. Clarity Matrix with G2 Architecture provides the very best visual performance of any LCD video wall available, with smaller bezels, higher brightness, better uniformityand better alignment. Updated connectivity and 10-bit processing combined with Planar's Big Picture Plus processing enables ultra HD 4K sources to be tiled across the video wall.

Perfect Alignment

The Clarity Matrix Video Wall System includes Planar's integrated EasyAxis Mounting System that features built-in precise alignment capabilities, in-wall service position and a super slim depth as thin as 3.6" (93mm). As a result, Clarity Matrix has the thinnest footprint of any LCD video wall, making it compliant with the Americans with Disabilities Act (ADA) requirement for protruding objects of less than four inches. EasyAxis adjustment cams facilitate precise 6-axis alignment ensuring uniform, minimized image-to-image gap.

EasyAxis Mounting System simplifies and minimizes the time required to install and maintain a perfectly aligned video wall

Mission Critical Design

Planar's unique architecture provides a mission-critical design with redundant power supplies, reduced thermal stress and health and status monitoring capabilities. Clarity Matrix with G2 Architecture adds SNMP LAN control, extra TIR prevention and ambient light sensing to extend the life of the video wall. For further reliability, Clarity Matrix power supply units include an n+1 redundant design so if any one power supply in the unit fails, the LCDs maintain uninterrupted operation.

Redundant power supply means greater up time

Fiber Video Extension option

For government and military customers delivering highly sensitive information, the Clarity Matrix Fiber Video Extension option provides a more secure and longer distance option for extending the video signal from the Clarity Matrix off-board electronics to the Clarity Matrix LCD video wall displays. The Fiber Video Extension provides integrated video extension over standard multi-mode or single-mode fiber optic cable. The Fiber Video Extension also incorporates an embedded USB extension in the fiber optic cable, eliminating the need for a third party USB extender.

Simplified Design, Installation and Service

Designing, installing and servicing a video wall with Clarity Matrix has never been easier. Clarity Matrix incorporates Planar's EasyAxis Mounting System delivering the industry's thinnest profile LCD video wall, built-in alignment and service capabilities. The new G2 architecture supports integrated video and power extension up to 500ft (150m) eliminating compatibility and integrity worries and costs associated with long distance cable extenders and AC power outlets behind the video wall. Fewer cables are necessary to run to the video wall, simplifying and reducing the cost of the system.

Clarity Matrix service mode for in-wall service

Clarity Matrix Architecture Advantages:

- Rack-mount components placed in easy-to-service location with no disruption at the video wall

- Co-location of the rack-mount components with sources or additional processing equipment for easy access

- No 3rd party long distance extenders or cables needed

- Entire video wall is controlled with a single remote control, RS232 or LAN device, including 3rd party control systems

- Fewer long distance cables run to the wall with on-wall, loop-out capabilities

- No AC outlets required behind the displays

- Automated brightness, color and gamma balancing tools

CLARITY MATRIX LCD VIDEO WALL SYSTEM SPECIFICATIONS

Model	LX46S-3D	LX46HDS	LX55HDS	MX46HDS	MX55HDS	LX46HDU	LX55HDU	MX46HDU	MX55HDU
Diagonal	46"	46"	55"	46"	55"	46"	55"	46"	55"
Brightness (optimal)	450 nits	500 nits	500 nits	800 nits	800 nits	500 nits	500 nits	800 nits	800 nits
Contrast ratio (full field typical)	4500:1	3500:1	3500:1	3500:1	3500:1	3500:1	3500:1	3500:1	3500:1
Power consumption (typical)*	205 watts	143 watts	176 watts	170 watts	228 watts	124 watts	163 watts	163 watts	219 watts
Heat load at LCD (typical)	623 BTU/hr	440 BTU/hr	557 BTU/hr	544 BTU/hr	628 BTU/hr	376 BTU/hr	520 BTU/hr	520 BTU/hr	628 BTU/hr
Resolution	1366 x 768	1920 x 1080							
Backlight type	CCFL	LED							
Full viewing angle	178 degrees								
Technology	Commercial-grade SPVA LCD								
Acoustic noise	Fanless operation								
Operating temperature	5 - 40° C								
Operating humidity range	20-90% RH non-condensing								
Backlight sensing and reporting	At display level								
Display module position sensing	Auto-sensing integrated								

MOUNTING

EasyAxis Mounting System	1 per display included. Optional VESA hole pattern available.
Orientation	Landscape and Portrait Options
Floor standing mount bases	Optional
In-wall service	Front and rear
Display module position adjustment	6-axis integrated
Regulations	Complies with EN60950, FCC Class A, CISPR22/85, EC, EU RoHS, TAA Compliant

POWER SUPPLY MODULE		QUAD CONTROLLER MODULE	
Type	1U rack mount controller drives up to 3-6 panels	Type	1U rack mount controller drives up to 4 panels
Redundancy	n+1 redundant power supplies (optional)	Inputs	4 single link HDMI with HDCP; DisplayPort 1.1 in and out
Line voltage	100-240 Volts AC, 50/60Hz auto switching	Image scaling	Clarity Big Picture Plus; 32x32 maximum
Power status	Diagnostic LED's, health monitoring and alerts	Mullion compensation	Integrated
Maximum distance from LCD	500 ft/150m max backlight	Control	RS-232, IR remote control, Clarity WallNet (LAN) (optional)
		Controller status	Diagnostic LED's, health monitoring and alerts
		Maximum distance from LCD	200ft/60m standard; 500ft/152m with long distance option

FIBER VIDEO EXTENSION MODULE OPTION

Type	1 RU rack mount module drives up to 4 panels.
Fiber Optic Connection Type	SFP multi-mode transceivers supports distances up to 1000 ft (300m) from video wall. Compatible with single-mode tranceivers supporting up to 10k from the wall. (Single-mode transceivers not provided)
USB Extension	USB-B @sp module; USB-A @sp panel
IR Remote Extension	Embedded
Power	AC Power Adapter; 100-240V AC ± 10%, 47 to 63 Hz; 50W

CLARITY MATRIX LCD VIDEO WALL SYSTEM DIMENSIONS

Model	LX46S-3D	LX46HDS-L	LX55HDS-L	MX46HDS-L	MX55HDS-L	LX46HDU-L	LX55HDU-L	MX46HDU-L	MX55HDU-L
Diagonal	46"	46"	55"	46"	55"	46"	55"	46"	55"
Cabinet dimensions (WxH)	40.3" x 22.8" (1225.7 mm x 579.8 mm)	40.3" x 22.8" (1023.9 mm x 578.6 mm)	47.8" x 27.0" (1215.3 mm x 686.1 mm)	40.3" x 22.8" (1023.9 mm x 578.6 mm)	47.8" x 27.0" (1215.3 mm x 686.1 mm)	40.3" x 22.8" (1023.9 mm x 578.6 mm)	47.8" x 27.0" (1215.3 mm x 686.1 mm)	40.3" x 22.8" (1023.9 mm x 578.6 mm)	47.8" x 27.0" (1215.3 mm x 686.1 mm)
**Installed depth with mount	3.6"/90mm	4.2"/107mm	4.2"/107mm	3.6"/90mm	3.6"/93 mm	3.6"/93 mm	3.6"/93 mm	3.6"/93 mm	3.6"/93 mm
Installed depth ERO with mount	N/A	4.4"/ 111mm	4.3"/ 110mm	3.7"/93mm	3.8"/96mm	3.7"/93mm	3.7"/93mm	3.7"/93mm	3.8"/96mm
LCD module depth with VESA Option (Display Only)	N/A	4"/101.7mm	4"/101.7mm	3.3"/ 84mm	3.3"/ 84mm	3.4"/ 86mm	3.3"/ 85mm	3.4"/ 86mm	3.3"/ 84mm
ERO LCD module depth with VESA Option	N/A	4.1"/ 105mm	4.1"/ 105mm	3.4"/ 86mm	3.4"/ 86mm	3.5"/ 89mm	3.4"/ 88mm	3.5"/ 89mm	3.4"/ 86mm
Total weight (includes LCD & mount)	48 lbs (21.8 kg) 58 lbs (26.3 kg) with ERO	48 lbs (21.8 kg) 58 lbs (26.3 kg) with ERO	59 lbs (26.8 kg) 74 lbs (33.6 kg) with ERO	48 lbs (21.8 kg) 58 lbs (26.3 kg) with ERO	59 lbs (26.8 kg) 74 lbs (33.6 kg) with ERO	42lbs (19 kg) 55 lbs (24.9 kg) with ERO	59 lbs (26.8 kg) 74 lbs (33.6 kg) with ERO	42lbs (19 kg) 55 lbs (24.9 kg) with ERO	59 lbs (26.8 kg) 74 lbs (33.6 kg) with ERO
Tiled bezel width	7.1 mm	5.5 mm				3.7 mm			

*Power consumption can vary with configuration and backlight setting **Complies with US ADA regulations for installed depth <4"

PLANAR

When image experience matters.

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