MPLED®

Make LED Display Simple

XR

Core Technology

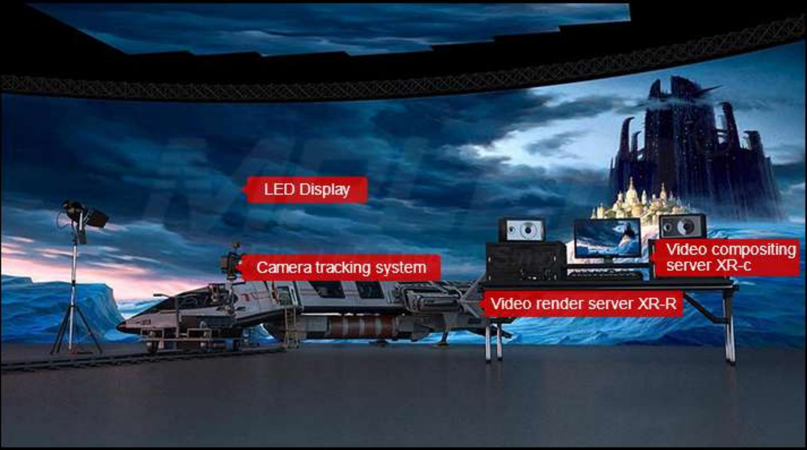
- Never Black Screen
- Intelligent and smart module
- Cloud monitoring
- World Class Calibration Technology

- 1500-2000nits
- Hz 7680Hz
- HDR HDR10 4:4:4
- bit 20bit
- DCI-P3 color gamut
- 240Hz High frame rate

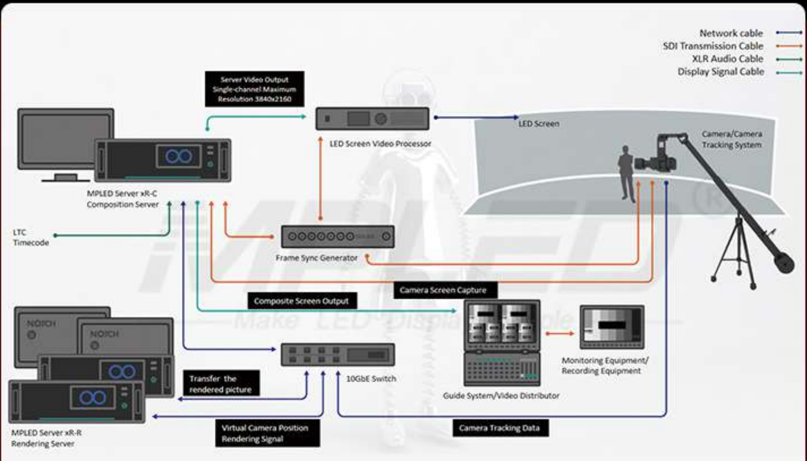
One-Stop Solution

MPLED offer One-stop XR LED display solution

LED Display+video compositing server XR-c+Video render server XR-R+camera tracking system



XR System Connection Diagram


Network cable
SDI Transmission Cable
XLR Audio Cable
Display Signal Cable
Server Video Output Single-channel Maximum Resolution 3840x2160
LED Screen Video Processor
LED Screen
Camera/Camera Tracking System
MPLED Server xR-C Composition Server
LTC Timecode
Frame Sync Generator
Camera Screen Capture
Composite Screen Output
NOTCH
NOTCH
10GbE Switch
Monitoring Equipment/ Recording Equipment
Transfer the rendered picture
Guide System/Video Distributor
MPLED Server xR-R Rendering Server
Virtual Camera Position Rendering Signal
Camera Tracking Data

What is XR Technology?

Extended Reality (xR)

Extended Reality (xR) is a term used to describe the spectrum of technologies that extend reality or create new realities by blending physical and digital worlds. xR includes virtual reality (VR), augmented reality (AR), and mixed reality (MR).Extend our experience of reality by merging the virtual and "real" worlds or creating fully immersive experiences

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Global LED Display And Solution Provider

AR
Augmented Reality

Augmented reality (AR) is often used to

describe the addition of 3D synthetic content to a real background view, placing virtual content in a real scene.

XR
Extended Reality

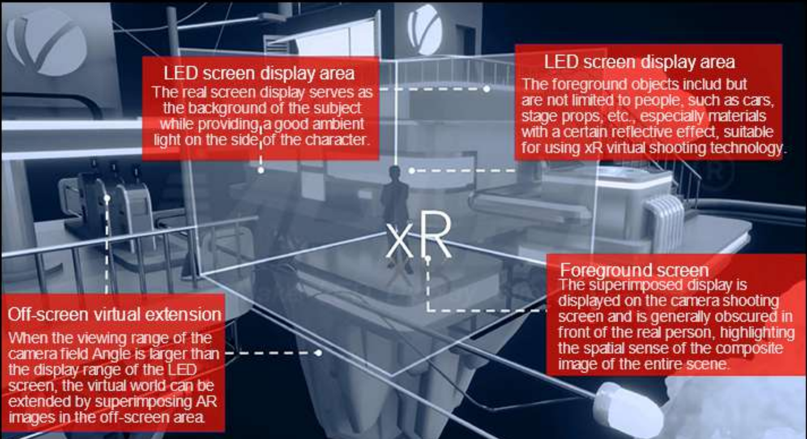
VR
Virtual Reality

Virtual reality (VR) refers to the use of computer technology to create a simulated environment, And let users get the experience of being in it. Users no longer watch the screen in front of them, but simulate and preview in the VR device

MR
Mixed Reality

MR goes beyond synthetic AR, placing real-time rendered content on screens around and below actors and real objects, creating rich virtual immerses in the space.

Description of"Background","Extension" and"Foreground"



LED screen display area
The real screen display serves as the background of the subject while providing a good ambient light on the side of the character.

LED screen display area
The foreground objects includ but are not limited to people, such as cars, stage props, etc., especially materials with a certain reflective effect, suitable for using xR virtual shooting technology.

Foreground screen
The superimposed display is displayed on the camera shooting screen and is generally obscured in front of the real person, highlighting the spatial sense of the composite image of the entire scene.

Off-screen virtual extension
When the viewing range of the camera field Angle is larger than the display range of the LED screen, the virtual world can be extended by superimposing AR images in the off-screen area

MPLED XR Grouped Equipment

MPLED Server xR	MPLED	xR Professional Servers are divided by function into: Render server, Composite server, Display server
Tracking System	stYpe/Mo-sys/Ncam/HTC VIVE/GENSINON	StypeKit/RedSpy/StarTracker The hecoos xR system can be adapted to other tracking systems that can be connected to frame synchronization signals (the tracking system is selected according to the shooting scene environment)
Camera	The camera needs to support the functional requirements of SDI video signal output and frame synchronization signal. It can be used for broadcast channel machine and movie camera.	
Camera Aids	Camera Support Equipment	Camera support equipment such as rocker arm, tripod, steadicam, etc. It can meet the needs of camera lens movement during shooting, flexible shooting in the horizontal and vertical range, etc.
	Light	According to the needs of the shooting screen, May include face light, contour light, side light, skylight, effect light, etc.
LED Screen	Select the screen process and size combination scheme according to the shooting needs. The screen styles that can be formed are: tri-fold screen, curved screen (including ground screen) The minimum size needs to ensure that from a general shooting angle, the display range completely covers the real subject to be shot.	
Audio/Video	Frame Sync Generator	Serving cameras, tracking systems, compositing servers, displays to provide frame synchronization signal.
	Switch	Building a 10 Gigabit LAN environment
	SDI Transmission Tine	Video transmission, synchronization signal transmission
	HDMI Transmission Tine	Video transmission
	LCD Monitor	Display monitoring
	Screen Switcher	For screen switching scheduling and recording

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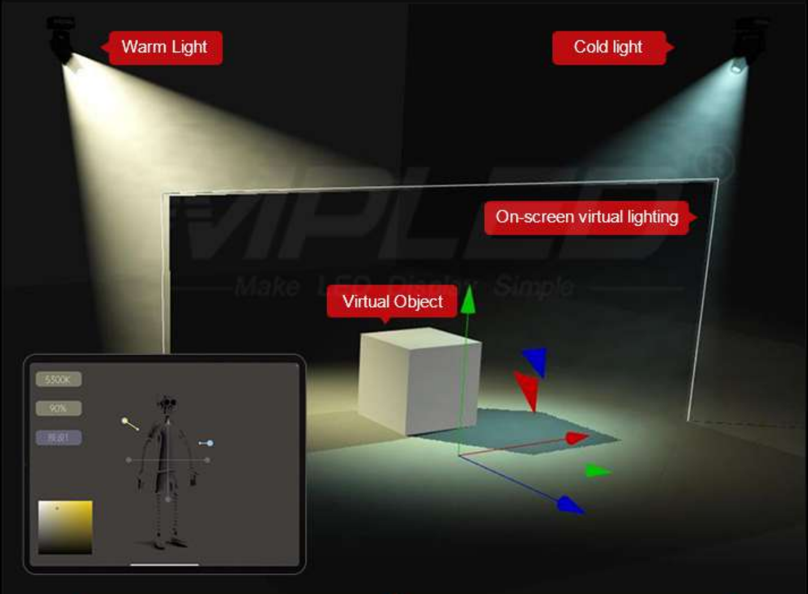
Virtual Lights Shine Into Reality

MPLED xR Virtual & Realistic Lighting Linkage Control

- The lighting configuration scheme of the virtual world to build the lighting layout of the real studio
- hecoos enables direct control of real luminaires through the ART-NET protocol control function within the software
- Through the final synthesis to achieve virtual and realistic lighting synchronization linkage
- Through the handheld device can quickly modify the light direction, color, and luminous intensity. According to the needs of the scene plot can also be produced preset files, in different light effect designs quickly switch



Real lights and virtual lights unified xR intelligent lighting control system schematic

MPLED XR Solution Character

MPLED xR Virtual & Realistic Lighting Linkage Control

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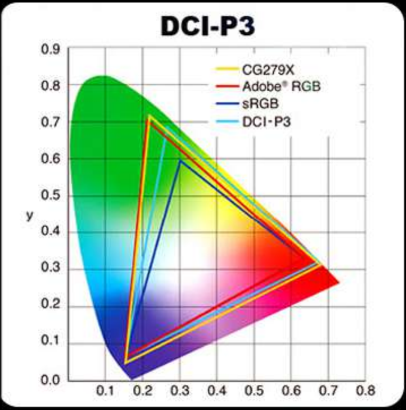

Wider Color Gamut

Reach DCI-P3 standard. The wider color gamut can greatly restore colors of nature's real color and create a perfect virtual environment

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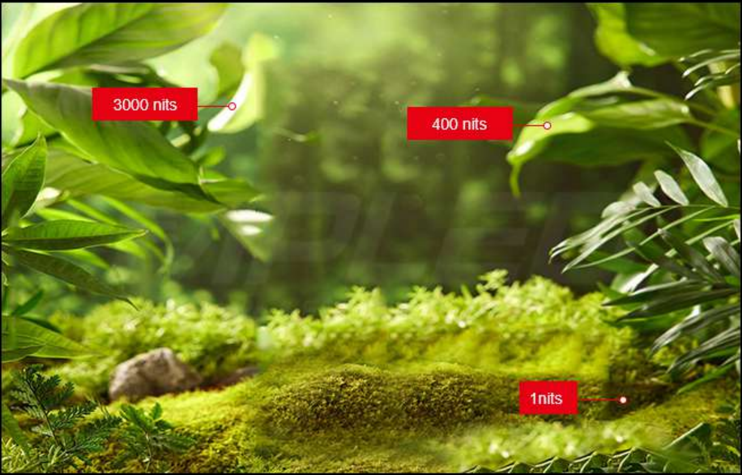
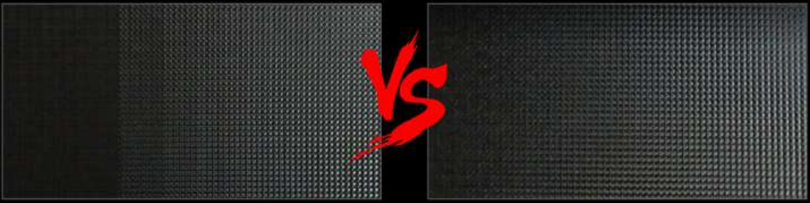


High Brightness and Large Brightness Range Support

- ✓ 1500-2000nits brightness,the screen can be visible at spotlight.
- ✓ Meanwhile MPLED XR solution support pixel to pixel display brightness,Nature dynamics is not limited to 600 nits !

Greyscale



OTHERS SCREEN

The screen has limitations banding on greyscale

MPLED SCREEN

The screen very smooth transition

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Wider color Gamut + **High Brightness** + **High Grayscale**

↓

True HDR

Others Company

The screen have limitations
Details in the dark side of the moon are lost

MPLED

The screen details in the dark side of
the moon are visible bright side can be brighter

High Refresh and High Frame Rate

High refresh rate

Low refresh rate

Ultra-High Refresh Rate

- Ultra-high refresh rate up to 7680HZ, providing better screen performance in the camera, and more accurately rendered images

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High frame rate

Low frame rate

IMPLED ®
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High Frame Rate

- Up to 250 frame per second transmission, making dynamic images more realistic and vivid.

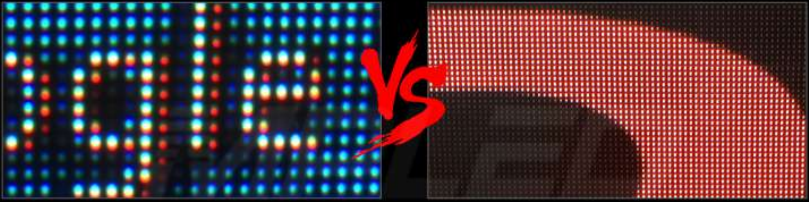
Anti-moire mask

Moire-effect

Reduce Moire-Effect

- With anti-moire mask can reduce moire, to achieves realistic and immersive virtual studio effects

Processing



Others Screen

Aliasing on logo or upscale/downscale artefacts

MPLED Screen

Most modern graphic processing

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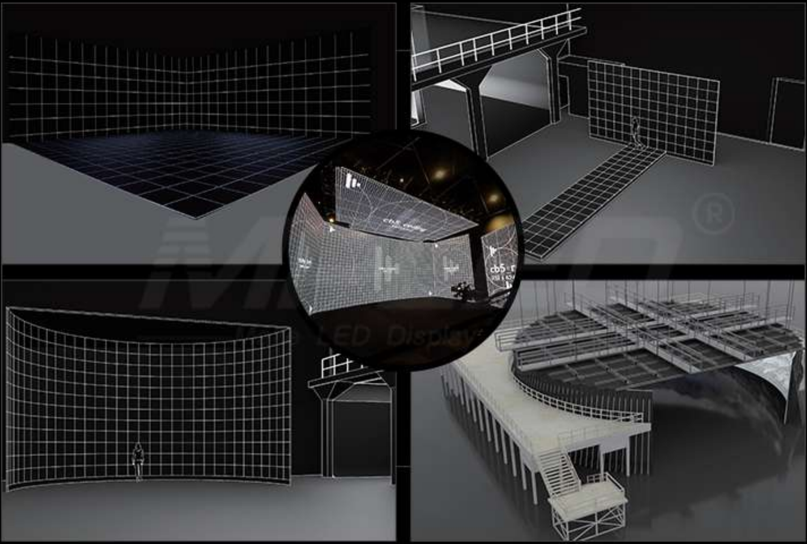
Typical XR Solution



XR Application

Film

Broadcast

Commercial

Live Event

Corporate

MTV/Stage

- Advertising shooting
- MTV & Online Concerts
- Filming/Virtual Production
- Studio
- E-sports
- TV series/Web drama
- Online Brand Events

XR LED Display Commercial Value

TTR LED displays have significant commercial value due to their ability to enhance the user experience in XR applications and devices. Here are some of the ways XR LED displays can create value:

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Highly realistic scenes

Virtual Engine Real-time Rendering
Immersive Lighting Simulation

Efficient shooting

Scenes production in advance Faster
scene switching Easier to get into a play

Cost saving

Production
cost Time cost

Brand marketing activities

- Global Product Launch
- Interactive art installation

Television studio

- Safe and untouched
- Seamless scene switching

E-sports activities

- XR live broadcast
- Restore Game

Film /TV/VR/Online play

- More realistic light
- All over the world in the studio
- Shorten film production cycle
- What you see is what you get

Advertising shooting

- Break through the shooting limit.
- Create virtual scenes: universe, dream, virtual space, etc.

MTV/Online Concert

- The stage space expands to infinite space
- Immersive shooting environment Reduced set costs

XR Series

Core Technology

Screen never Blind
Intelligent and smart module
Cloud monitoring
World Class Calibration Technology

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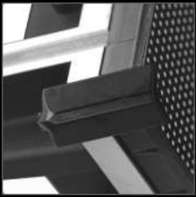
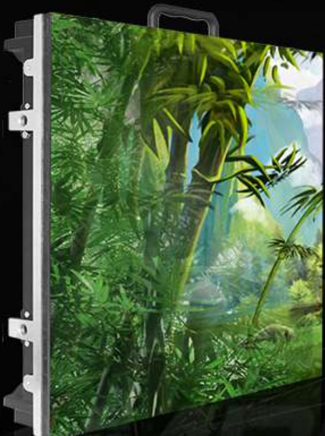


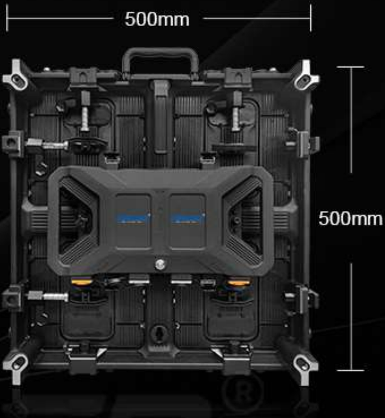
Protect corner

+_15degree curved lock

Support front&
rear maintenance

Optional magnetic
connector for cabinet





500mm*500mm (W*H)

Make LED Display Simple

Parameter	P1.95 Indoor	P2.6 Indoor
Brightness(cd/m^2)	1500-2000	1500-2000
Refresh rate (Hz)	7680Hz	
Frame rate (Hz)	50/60/120/144/240Hz(optional)	
Gamut	DCI-P3	
Curving(Concave & Convex)	0°/±2.5°±5°(optional)	
Max/Ave (W/m^2)	800/240 (W/m2)	
Contrast ratio	≥5000:1	
Grayscale (bit)	20bit	
Viewing angle (Deg)	Horizontal≥160° ,Vertical≥140°	
Work environment	Temperature -20^{0}C~+80^{0}C Humidity10%RH~95%RH	
Lifespan/MTBF(H)	Lifespan≥100000,MTBF ≥50000	