Colorlight

X8m

LED Video Controller

Specification V1.0

Overview

X8m is an Ultra-4K LED video controller with powerful video signal input and processing abilities. It is so versatile, offering flexible screen control and high-quality image display portfolios. The device supports 4K and 2K video signal inputs and LAN port output mode. A load capacity of up to 5.24 million pixels creates a dynamic viewing experience that stays with you.

Features

Input

- Supports up to 4096×2160@60Hz resolution
- 4K input ports: 1×DP1.2, 1×HDMI2.0
- 2K input ports: 4×HDMI1.4
- 1×USB drive port

Output

- Load capacity up to 5.24 million pixels
- 8×Gigabit Ethernet ports

Audio

- 1×independent audio input
- 1×independent audio output
- Supports for HDMI and DP audio decoding and output

Functions

- Supports up to 6 windows, one layer for each window, layers overlap each other
  -1×4 input: simultaneously supports for 4 HD input ports and 5 windows
  -2×4 inputs: supports for 2 windows

Number of 4K signal layer in the canvas	Maximum number of layers	Description of the largest layer
1	5	1×4k + 4×HD
2	2	2×4K
0	6	6×HD

- Navigate and resize windows, with a minimum window size of 64×64
- Crop with ease and seamlessly switch video signals, resize cutting frame, with a minimum window size of 64×64
- Different types of receiving cards enable precise color management and adjustable

color gamut

- Genlock synchronization: supports for internal vsync locking, signal source input, and auto-genlock according to layers
- Supports for adjustment of the brightness and color temperature, supports for precise color temperature
- Supports for 3D (Optional)
- Better grayscale at low brightness: effectively maintains the complete display of grayscale under low brightness
- Supports for saving and loading of 128 preset scenes
- Supports for playback and upgrading via USB drive
- Supports for OSD (Optional)

Control

- USB port for control and cascading
- RS232 Protocol control
- Supports for LAN port control
- Supports for control with apps

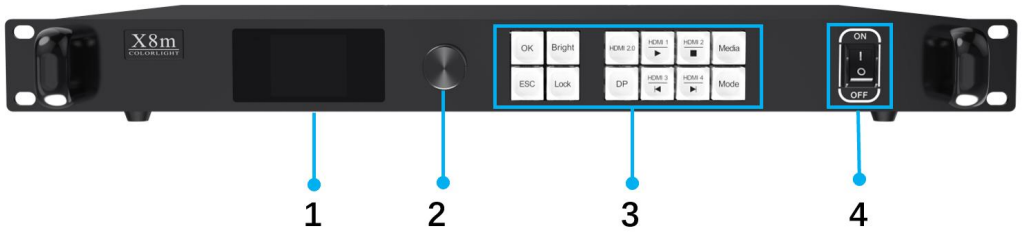
Configuration

Operating environment of the video control system includes:

- Operating system: Windows Server 2016 (No restrictions).
- CPU: Dual-core 2.5GHz or better
- Memory: 8GB RAM or above
- SSD: 150GB or above

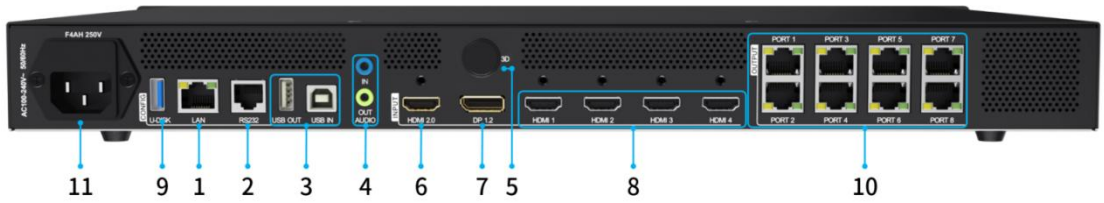
Appearance

Front Panel



No.	Item	Description
1	LCD	Display the operation menu and system information
2	Knob	• Press to enter submenu or confirm your selection • Rotate the knob to select menu item or adjust parameters
3	Function Buttons	• **OK**: Confirm • **Bright**: Adjust screen brightness • **ESC**: Exit the current operation or back to previous menu • **Lock**: Lock front panel buttons • **HDMI 2.0 / DP / HDMI 1 / HDMI 2 / HDMI 3 / HDMI 4:** - Switch signals - In USB drive playback mode, these buttons serve respectively as play ▶ pause ■ previous ⏮ and next ⏭ • **Media**: Play media • **Mode**: Select preset scenes
4	Switch	Switch On/Off

Rear Panel



Control		
1	LAN	Connects to LAN using RJ45 port
2	RS232	Connects to central control using RJ11(6P6C) port*
3	USB IN	Connects to computer to adjust parameters or cascade input using USB2.0 Type B port
	USB OUT	Cascading output using USB2.0 Type A port
Audio		
4	AUDIO IN	3.5mm port, receives audio signal from computer and other devices
	AUDIO OUT	3.5mm port, sends audio signal to active speaker and other devices (Supports for HDMI and DP audio decoding and output)
3D		
5	3D*	Outputs 3D sync signal (Active 3D glasses needs to be purchased separately as an optional accessory)
Input		
6	HDMI 2.0	• 1×HDMI2.0 input, downward compatible with HDMI1.4 and HDMI1.3 • Maximum input resolution: 4096×2160@60Hz, minimum input resolution: 800×600@60Hz, maximum pixel clock: 600MHz • Custom resolution: - Maximum width: 8,192 pixels (8192×1080@60Hz) - Maximum height: 8,192 pixels (1080×8192@60Hz) • Supports for independent EDID settings, adopts EDID Standard Version 1.3. • Supports for audio input • HDR not supported • Interlaced signal input not supported
7	DP 1.2	• 1×DP1.2 input

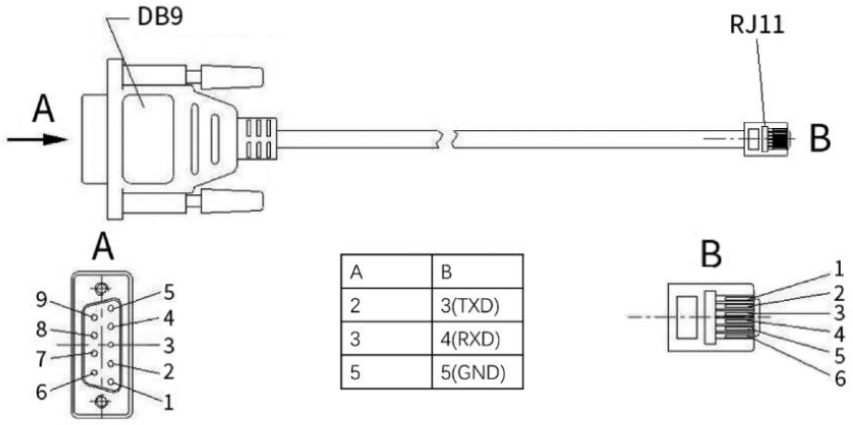
		• Maximum resolution: 4096 × 2160@60Hz, minimum resolution: 800 × 600@60Hz, maximum pixel clock: 600MHz • Custom resolution: - Maximum width: 8192 pixels (8192×1080@60Hz) - Maximum height: 8192 pixels (1080×8192@60Hz) • Supports for independent EDID settings, adopts EDID Standard Version 1.3. • Supports for audio input • HDR not supported • Interlaced signal input not supported
8	HDMI 1 HDMI 2 HDMI 3 HDMI 4	• 4×HDMI1.4 input • Maximum resolution: 1920×1200@60Hz, minimum resolution: 800×600@60Hz, maximum pixel clock: 165MHz • Custom resolution: - Maximum width: 4096 pixels (4096×512@60Hz) - Maximum height: 4096 pixels (512×4096@60Hz) • Supports for independent EDID settings, adopts EDID Standard Version 1.3. • Supports for HDCP1.4 • Supports for audio input • Interlaced signal input not supported
9	U-DISK	• USB drive port, supports for playback of videos/images in USB drive • Supported USB drive includes NTFS, tFAT32, exFAT, other types are not supported yet • Image file formats: .jpeg, .png, .webp, .gif, .bmp • Maximum image resolution: 4096×2160@60Hz • Video file formats: .3gp, .avi, .flv, .m4v, mkv, .mp4, .tp, .ts, .vob, .wmv, .mpeg - Video coding: MPEG-1/2, MPEG-4, H.264/AVC, H.265/HEVC, GOOGLE VP8, MOTION JPEG - Audio coding: MPEG Audio, Windows Media Audio, AAC Audio, AMR Audio • Video resolution: - Maximum: 4096×2160@60Hz (video file formats include: H.264/AVC, MVC, H.265/HEVC)

		- Maximum: 1920×1080@60Hz (video file formats include: MPEG-1/2, MPEG-4, GOOGLE VP8, VC-1)

Output		
10	PORT 1-8	• 8×1G LAN port output • Load capacity per port: - Single LAN port: 655,360 pixels - Outputs 8bit@60Hz: 650,000 pixels - Outputs 8bit@120Hz: 320,000 pixels - Outputs 8bit @240Hz: 160,000 pixels • Total load capacity: - Total load capacity: 5.24 million pixels - Outputs 8bit@60Hz: 5.24 million pixels - Outputs 8bit@120Hz: 2.62 million pixels - Outputs 8bit@240Hz: 1.31 million pixels - Maximum 16,384 in width, 8,192 pixels in height • Communication distance: The recommended maximum cable (CAT5e) run length is 100 meters • Supports for redundancy
Power		
11	AC100-240V	Power input, 100-240V, 50/60Hz, with built-in fuse

* The image shown is for illustration purposes only and may not be an exact representation of the product due to production process. Please in kind prevail.

* RJ11 (6P6C) to DB9 cable is shown below:



A	B
2	3(TXD)
3	4(RXD)
5	5(GND)

Signal Formats

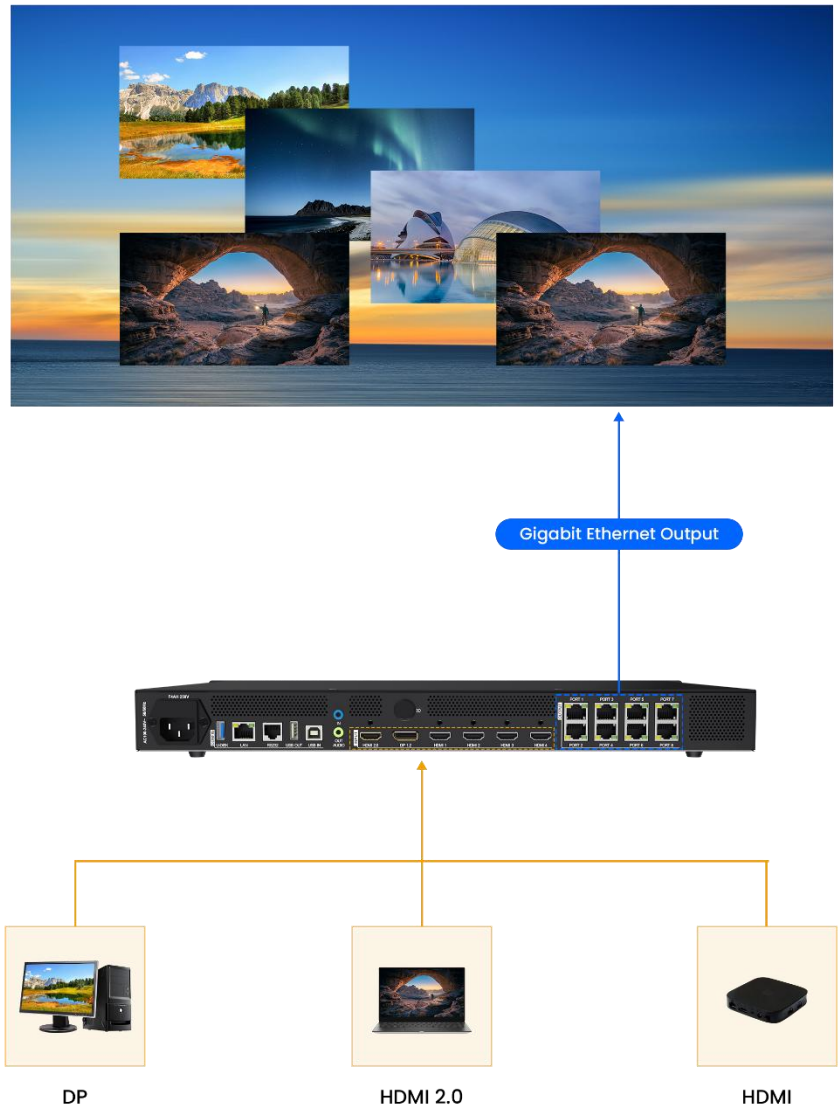
HDMI2.0					
Input	**Color Space**	**Sampling**	**Bit Depth**	**Maximum Resolution**	**Frame Rate**
4K	YCbCr	4:2:2	8bit	4096×2160@60Hz	23.98, 30, 50, 59.94, 60
	YcbCr/RGB	4:4:4	8bit		
2K	YcbCr	4:2:2	8bit	1920×1200@60Hz	23.97, 24, 30, 50, 59, 94, 60, 100, 120, 144
	YcbCr/RGB	4:4:4	8bit		
HD	YcbCr	4:2:2	8bit	1280×1200@60Hz	23.97, 24,30, 50, 59, 94, 60, 100, 120, 144, 240
	YcbCr/RGB	4:4:4	8bit		
DP1.2					
4K	YcbCr	4:2:2	8bit	4096×2160@60Hz	23.98, 30, 50, 59.94, 60
	YcbCr/RGB	4:4:4	8bit		
2K	YcbCr	4:2:2	8bit	1920×1200@60Hz	23.97, 24, 30, 50, 59, 94, 60, 100, 120, 144
	YcbCr/RGB	4:4:4	8bit		
HD	YcbCr	4:2:2	8bit	1280×1200@60Hz	23.97, 24, 30, 50, 59, 94, 60, 100, 120, 144, 240
	YcbCr/RGB	4:4:4	8bit		
HDMI 1.4					
2K	YcbCr	4:2:2	8bit	1920×1200@60Hz	29.97, 59.94, 30, 50, 60
	YcbCr/RGB	4:4:4	8bit		
	YcbCr	4:2:2	8bit	1920×1080@60Hz	29.97, 59.94, 30, 50, 60
	YcbCr/RGB	4:4:4	8bit		

* The above shows only some of the standard definition.
YcbC4420, 10bit, 12bit not supported

Specifications

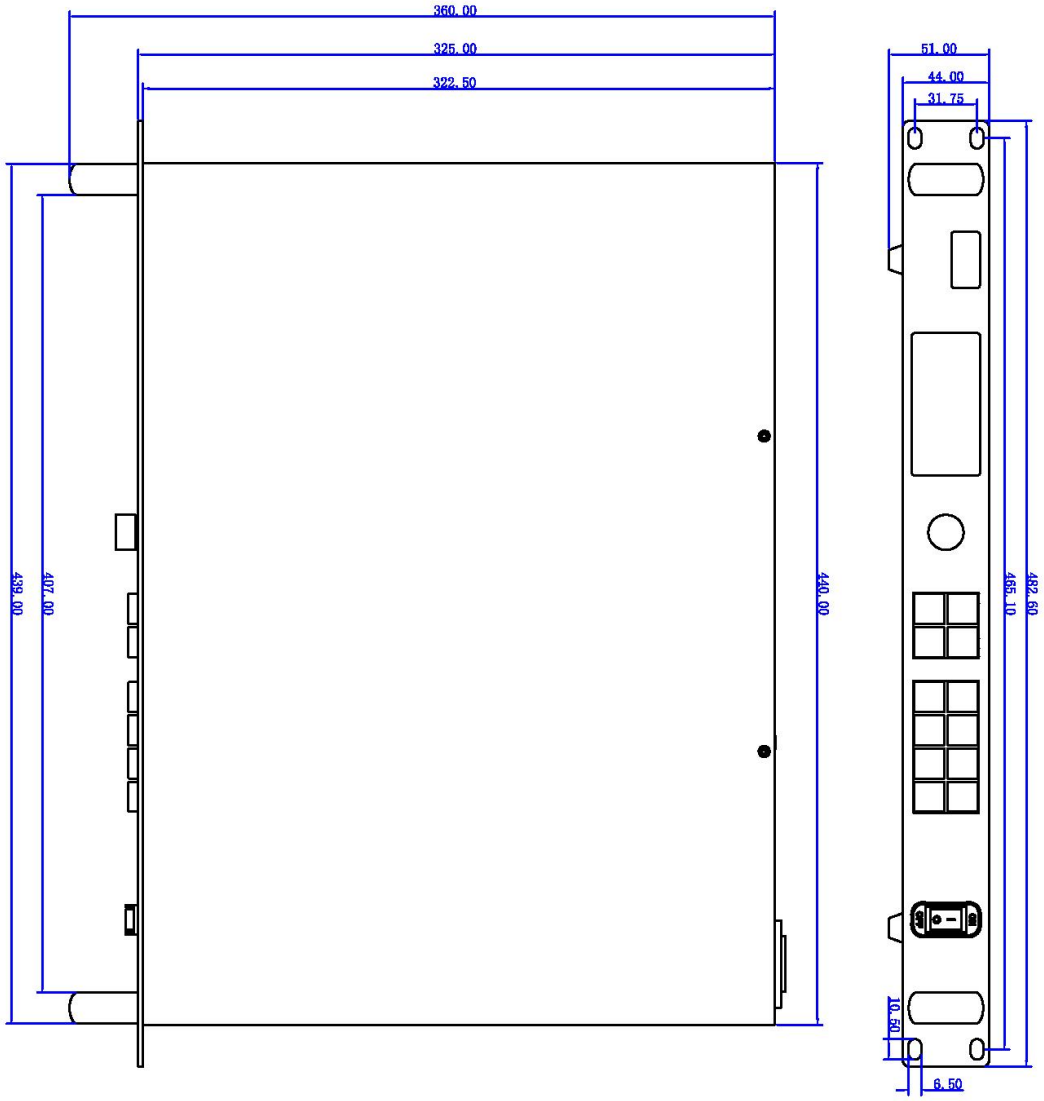
Dimensions (W×H×D)	
Main unit	482.6 mm (19")×44.0 mm (1.7")×360.0 mm (14.2"), no foot pads
Packing	550.0 mm (21.6")×115.0 mm (4.5")×490.0 mm (19.3")
Weight	
Net	4.24kg (9.35lbs)
Gross	4.86kg (10.71lbs)
Electrical characteristics	
Power supply	AC100-240V, 50/60Hz
Rated power	52W
Operating environment	
Temperature	-20℃ to 50℃ (-4°F to 122°F)
Humidity	0%RH to 80%RH, non-condensing
Storage environment	
Temperature	-30℃ to 80℃ (-22°F to 176°F)
Humidity	0%RH to 90%RH, non-condensing
Certifications	
CE, FCC, IC, UKCA * If the product does not have the relevant certifications required by country or region where it is to be sold, please contact Colorlight to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks or Colorlight has the right to claim compensation.	

Applications



Reference Dimensions

Unit: mm



Statement

Due to possible changes in product batches and production processes, the text and pictures in the document may be adjusted and revised to match accurate product information, specifications, and features. Colorlight may make improvements and changes to this document without prior notice. Please refer to the actual product.

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