

# LED Video Controller

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Specification v1.0



## Overview

LED Video Controller is a controller with powerful video input and processing capacity. It supports 4K inputs with DP 1.2 and HDMI 2.0 connectors, and 2K inputs with HDMI 1.4 and DVI connectors. A single unit features a loading capacity of 26.21 million pixels. Equipped with 40 Gigabit Ethernet ports and 4×10G optical fiber ports, the controller is able to meet the need of different clients. Additionally, the controller boasts abundant practical functions that enable flexible screen control and high-quality image display.

## Features

### Input

- Maximum 4096×2160@60Hz.
- 4K input interface: 1× DP1.2, 1× HDMI2.0.
- 2K input interface: 2× HDMI1.4, 2× DVI.
- U-DISK interface: 1× USB3.0.

### Output

- Maximum loading capacity 26.21million pixels.
- 40 Gigabit Ethernet ports output or 4×10 Gigabit optical ports output.<sup>①</sup>

### Audio

- 1× 3.5mm input.
- 1× 3.5mm, support HDMI and DP audio outputs.

### Function

- Up to 6-window display, 1 layer per window.<sup>②</sup>
- Support freely moving the window, the size is at least 64×64.
- Support freely cropping and seamless switching, the size is at least 64×64.
- Adjusting display color gamut with precision color management, it needs corresponding specific receiving cards.
- Lock internal sync, input signal source frame, automatic phase locking (according to the layer).
- Bright and color temperature adjustment with precision.

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<sup>①</sup> Ethernet port output and optical port output cannot be used at the same time.

<sup>②</sup> When one 4K input signal, it can also support four 2K input; when two 4K input signals, only 2 windows can be opened.

- 3D display (purchase separately).
- Better grayscale at low brightness for improving the grayscale performance in low brightness.
- 128 scene parameters can be saved and recalled.
- Upgrade program and play photos, videos with U-disk.
- OSD is used to play videos, pictures and adjust the screen display (optional).

### Control

- USB port for control and cascading.
- RS232 protocol.
- LAN port for TCP/IP control.
- Android APP for phones and tablets.

## Appearance

### Front panel

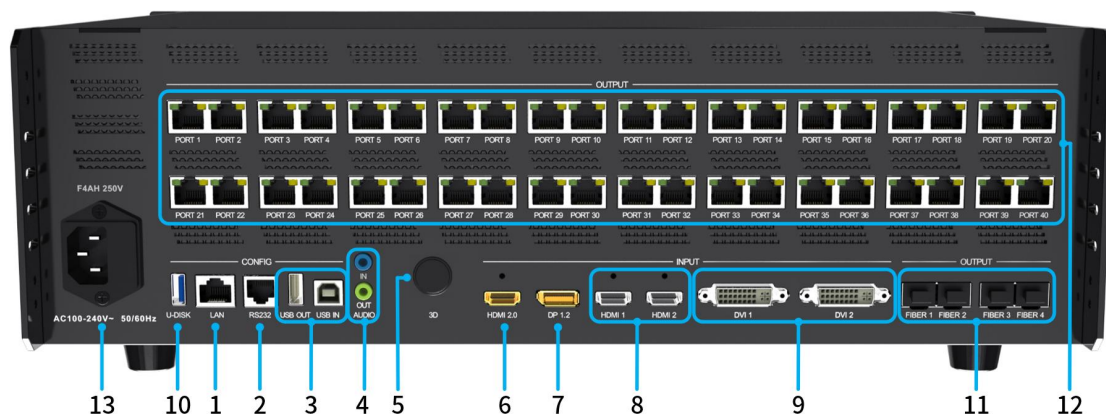


No.	Item	Function
1	LCD screen	Display the operation menu and system information.
2	Knob	Press the knob to access the submenu or confirm. Turn the knob to select menu items or adjust parameters.
3	Function button	<ul style="list-style-type: none"> <li>• <b>OK</b>: Enter.</li> <li>• <b>Bright</b>: Adjust brightness.</li> <li>• <b>ESC</b>: Exit the current interface.</li> <li>• <b>Black</b>: Black the screen.</li> <li>• <b>Lock</b>: Lock the front panel keys.</li> <li>• <b>Freeze</b>: Freeze the output screen.</li> <li>• <b>HDMI 2.0 / DP / HDMI 1</b> <b>HDMI 2</b> <b>DVI 1</b> <b>DVI 2</b> </li> </ul> <p>- Switching to a signal source by clicking corresponding button.</p>

		<ul style="list-style-type: none"> <li>- In U-disk playback mode, these buttons serve respectively as play / pause, stop, previous and next.</li> <li>• <b>Signal:</b> View signal status.</li> <li>• <b>Media:</b> Media playback function buttons.</li> <li>• <b>Mode:</b> Choose a preset scene.</li> </ul>
4	Power Switch	Switch on / off.

\* The product pictures are for reference only, please refer to the actual product.

## Rear panel

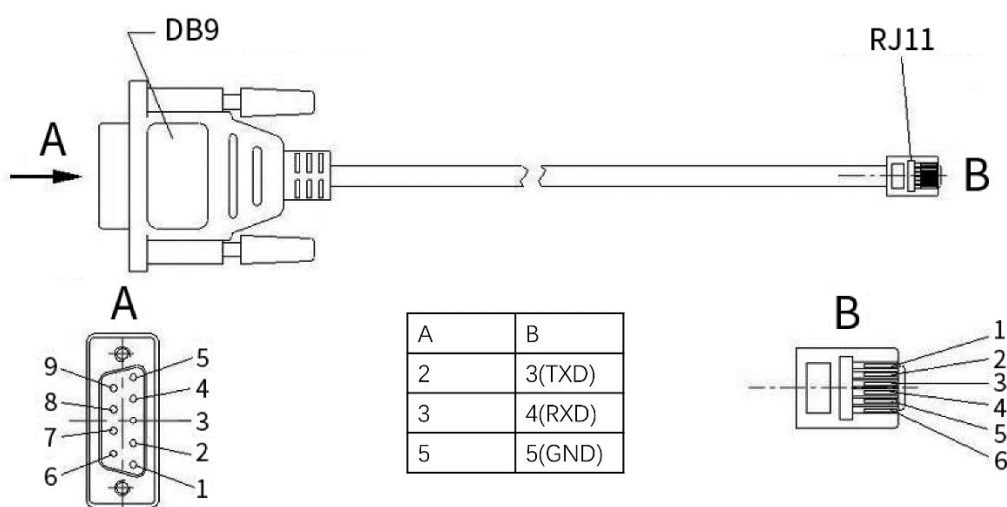


Control		
1	LAN	RJ45 port, connect to a switch for accessing local area network.
2	RS232	*RJ11 port(6P6C), connect to third-party device.
3	USB IN	USB2.0 Type B port, connect to PC for debugging.
	USB OUT	USB2.0 Type A port, as cascading output.
Audio		
4	AUDIO IN	<ul style="list-style-type: none"> <li>• Interface type: 3.5mm.</li> <li>• Receive audio signals from computers and other equipment.</li> </ul>
	AUDIO OUT	<ul style="list-style-type: none"> <li>• Interface type: 3.5mm.</li> <li>• Support HDMI, DP audio decoding and output audio signals to device such as active speakers.</li> </ul>
3D		
5	3D*	Output 3D sync signal (optional, for use with active 3D glasses).
Input		
6	HDMI 2.0	• 1×HDMI2.0 input, support HDMI1.4/HDMI1.3.

		<ul style="list-style-type: none"> <li>• Maximum 4096×2160@60Hz, maximum pixel clock 600MHz.</li> <li>• Customized resolution: up to 8192 pixels in width or in height.</li> <li>• Support EDID settings.</li> <li>• Support audio input.</li> </ul>
7	DP 1.2	<ul style="list-style-type: none"> <li>• 1×DP1.2 input.</li> <li>• Maximum 4096×2160@60Hz, maximum pixel clock 600MHz.</li> <li>• Customized resolution: up to 8192 pixels in width or in height.</li> <li>• Support EDID settings.</li> <li>• Support audio input.</li> </ul>
8	HDMI 1, HDMI 2	<ul style="list-style-type: none"> <li>• 2× HDMI1.4 input.</li> <li>• Maximum 1920×1200@60Hz, maximum pixel clock 165MHz.</li> <li>• Customized resolution: up to 4096 pixels in width or in height.</li> <li>• Support EDID settings.</li> <li>• Support audio input.</li> </ul>
9	DVI 1, DVI 2	<ul style="list-style-type: none"> <li>• 2× DVI input.</li> <li>• Support 1920×1200@60Hz, maximum pixel clock 165MHz.</li> <li>• Customized resolution: up to 4096 pixels in width or in height.</li> <li>• Support EDID settings.</li> </ul>
10	U-DISK	<ul style="list-style-type: none"> <li>• U-disk interface, hot-swappable, support play video / photo playback from U-disk.</li> <li>• USB flash drive format: NTFS, FAT32, exFAT.</li> <li>• Image format: JPEG, BMP, PNG, WEBP, GIF. <ul style="list-style-type: none"> <li>- Maximum image 4096×2160.</li> </ul> </li> <li>• Video file: 3GP, AVI, FLV, M4V, MKV, MP4, TP, TS, VOB, WMV, MPEG. <ul style="list-style-type: none"> <li>- Video encoding: MPEG-1 / 2, MPEG-4, H.264/AVC, H.265/HEVC, GOOGLE VP8, MOTION JPEG.</li> <li>- Audio encoding: MPEG Audio, Windows Media Audio, AAC Audio, AMR Audio.</li> <li>- Maximum 4096×2160@60Hz.</li> </ul> </li> </ul>
<b>Output</b>		
11	FIBER 1, FIBER 2, FIBER 3, FIBER 4	<ul style="list-style-type: none"> <li>• 4×10G Optical interfaces. <ul style="list-style-type: none"> <li>- FIBER 1 corresponds to PORT 1-10 Gigabit Ethernet ports output.</li> <li>- FIBER 2 corresponds to PORT 11-20 Gigabit Ethernet ports output.</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- FIBER 3 corresponds to PORT 21-30 Gigabit Ethernet ports output.</li> <li>- FIBER 4 corresponds to PORT 31-40 Gigabit Ethernet ports output.</li> <li>• Equipped with 10G single-mode optical module (purchase separately), the device supports dual LC fiber interface (wavelength 1310nm, transmission distance 2 km).</li> </ul>
12	PORT 1-40	<ul style="list-style-type: none"> <li>• 40 Gigabit Ethernet ports. <ul style="list-style-type: none"> <li>- One network port load capacity: 655360 pixels, total load capacity is 26.21 million pixels.</li> <li>- Maximum 16384 pixels in width or 8192 pixels in height.</li> </ul> </li> <li>• The recommended maximum cable (Cat 5e) run length is 100 meters.</li> <li>• Support redundant backup.</li> </ul>
<b>Power supply</b>		
13	Power Socket	AC100-240V, 50 / 60Hz, connect to AC power supply, built-in fuse.

\* DB9 female to RJ11(6P6C) cable:



## Applications



## Signal format

Input	Color space	Sampling	Color depth	Max Resolution	Frame rate
HDMI2.0	YCbCr	4:2:2	8bit	4096×2160@60Hz	23.98, 24, 25, 29.97, 30, 50, 59.97, 60, 120, 144, 200, 240
	YCbCr/ RGB	4:4:4	8bit		
DP1.2	YCbCr	4:2:2	8bit	4096×2160@60Hz	23.98, 24, 25, 29.97, 30, 50, 59.97, 60, 120, 144, 200, 240
	YCbCr/ RGB	4:4:4	8bit		
DVI	YCbCr	4:2:2	8bit	1920×1200@60Hz	23.98, 24, 25, 29.97, 30, 50, 59.97, 60, 120, 144, 200, 240
	YCbCr/ RGB	4:4:4	8bit		
HDMI 1.4	YCbCr	4:2:2	8bit	1920×1200@60Hz	23.98, 24, 25, 29.97, 30, 50, 59.97, 60, 120, 144, 200, 240
	YCbCr/ RGB	4:4:4	8bit		

\* Only some of the regular resolutions are shown above.

## Parameters

Dimensions (W×H×D)	
Unboxed	482.6mm (19") × 133.3mm (5.3") × 385.0mm (15.2"), w/o foot pads.
Boxed	560.0mm (22.1") × 240.0mm (9.5") × 480.0mm (18.9")
Weight	
Net weight	6.10kg (13.45lbs)
Total weight	8.80kg (19.40lbs)
Electrical specification	
Power input	AC100-240V, 2.6A, 50/60Hz
Rated power	85W
Operating environment	
Temperature	-20°C~65°C (-4°F~149°F)
Humidity	0%RH~80%RH, no condensation
Storage environment	
Temperature	-30°C~80°C (-22°F~176°F)
Humidity	0%RH~90%RH, no condensation



# Reference dimensions

Unit: mm

