

M40

2IN1 Video Processor

Specification V4.0



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1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	(V1.0.0)	June 13(th), 2025	First release

2 Product Introduction

M40 is an easy-to-operate and feature-rich device that specially developed for LED displays. Supporting Ultra HD (UHD), HD, and mixed interface inputs, it can simultaneously display up to 6 screens while processing 5 different input sources. Offering dual output modes via Ethernet or fiber optic ports, it features 40 Gigabit Ethernet outputs capable of driving LED displays with up to 26 million pixels. It supports 4K high-definition multi-type interface input, integrates professional display control technology and powerful video processing capabilities, and it simplifies the scene environment to build a video processor. Using high-performance image processing chip; with advanced interlaced image adaptive processing technology and ultra-clear noise reduction engine, eliminating video image motion smearing and jagged phenomenon, the video image enhancement technology makes the image clearer and more detailed, rich in details, and full of colors, Image quality is stable..

3 Product Characteristics

3.1 Improve the display effect

- Multiple input interfaces
1×HDMI2.0, 1×HDMI2.0 (Built-in HDMI Interface), 2×HDMI1.4, 1×DP1.2, 2×DVI
- EDID, Support custom EDID management

- Output interface
 - 40 gigabit network ports
 - Maximum load 26 million pixels, custom output resolution, regular version maximum width 16384, maximum height 16384
 - 4 fiber optic ports (OPT1~OPT4)
- Audio interface: Support audio input and output

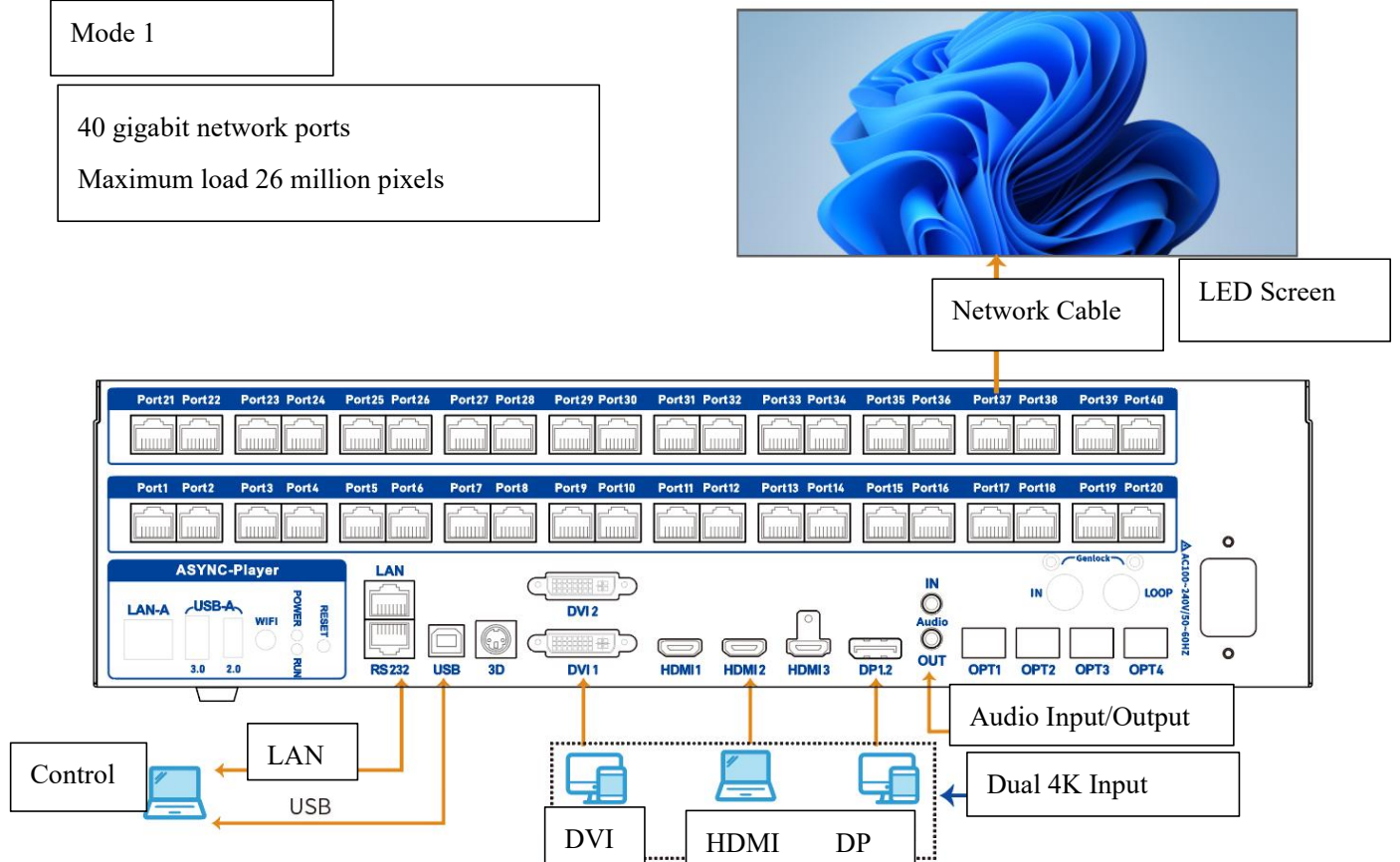
3.2 Diversified Display Function

- Picture-in-Picture Function: Insert additional video streams into the main 4K input display, supporting window overlay, roaming, and seamless switching
- Multi-Layer Functionality: 2x 4K + 2x 2K, or 6x 2K
- Multi-Scene Saving and Recall: Supports 128 scene templates for direct recall; Built-in clock with scheduled scene template switching
- 3D: Supports 3D display, active 3D display
- HDR Display Support
- Key Lock Function Support
- Data Inspection Function Support
- PC Software Control for Window Opening, Resizable & Positionable Windows via Drag-and-Drop
- Supports Screen Freeze, One-Click Black Screen for Output
- Supports USB Interface & 100Mbps Ethernet Control
- RS232 Serial Protocol

4 Application Scenarios

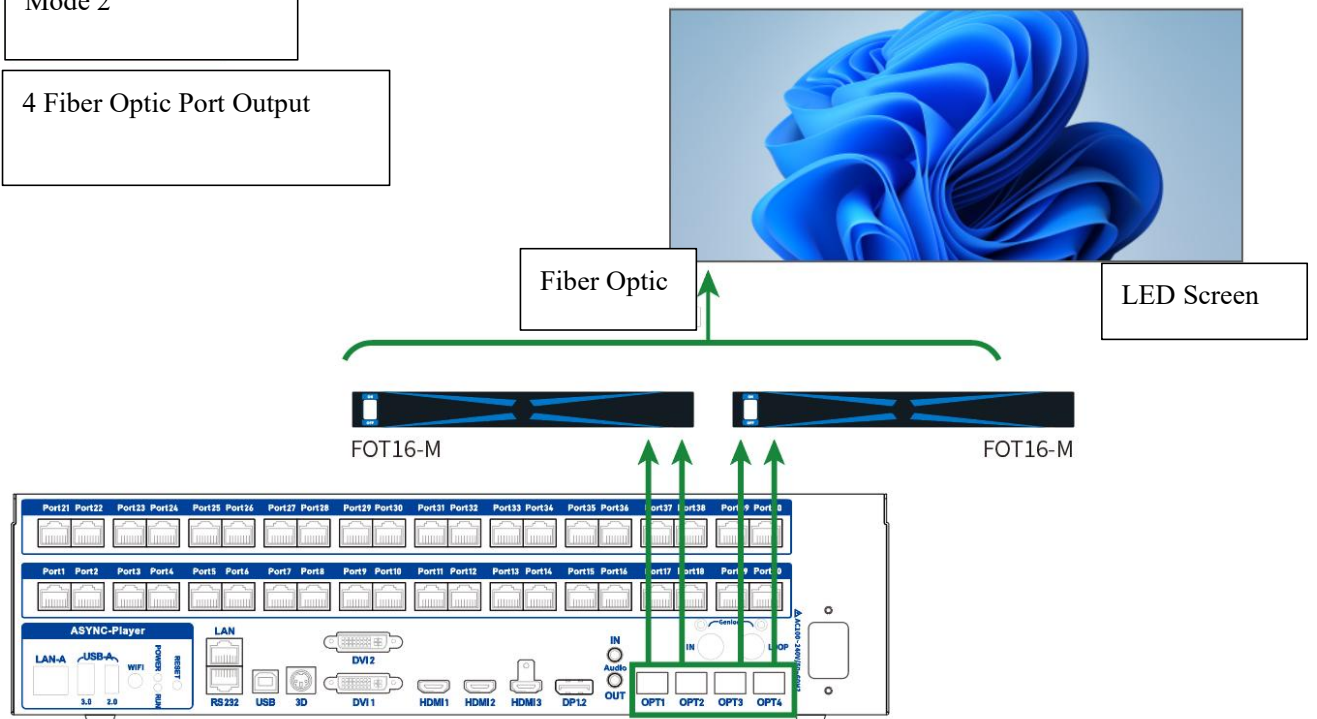
Mode 1

40 gigabit network ports
Maximum load 26 million pixels



Mode 2

4 Fiber Optic Port Output



5 Product Appearance



*Product images are for reference only. The actual product shall prevail upon purchase.

5.1 Data Interface Illustration

#	Keys	Illustrations	
1	ON/OFF	Power ON/OFF	
2	LCD Display	To display the current status of the device and to have the menu settings.	
3	Knob	1 、 In the main interface,press the knob to enter the menu operation interface; 2、 In the menu operation interface,rotate the knob to choose the menu, press the knob to select the current menu or enter its sub-menu. 3 、 Once the menu that is with parameters selected, you could rotate the knob to adjust the parameters. 4. Long press to unlock the menu.	
4	Esc	Return(ESC)/Cancel the current menu or operation.	
5	Input Signal	DVI1	DVI Source/Digital Key 1: Off: This signal source is not selected Flashing: This signal source is selected but no signal is present On: This signal source is selected and a signal is present

5	Input Signal	DVI2	DVI Source/Digital Key 2: Off: This signal source is not selected Flashing: This signal source is selected but no signal is present On: This signal source is selected and a signal is present
		HDMI1	HDMI1 Source/Digital Key 3: Off: This source is not selected Flashing: This source is selected but no signal is present Solid: This source is selected and a signal is present
		HDMI2	HDMI2 Source Digital Indicator 6: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		DP	DP Source/Num 8: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		HDMI3	HDMI3 Source/Digital Key 7: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present

6	Function Button	WIN	WIN/Num 4: Layer Selection
		PART	PART/Num 5: Partial/Fullscreen Shortcut Button
		TEMPLATE	Open multiple windows; use this key to switch between them
		HDMI4(Built-in)	HDMI4/Number 9: Quick key for adjusting screen size Built-in playback board signal source
		FREEZE	FREEZE/Num 0: Custom Black Screen or Freeze
		MODE	Load scene shortcut key

Rear Panel



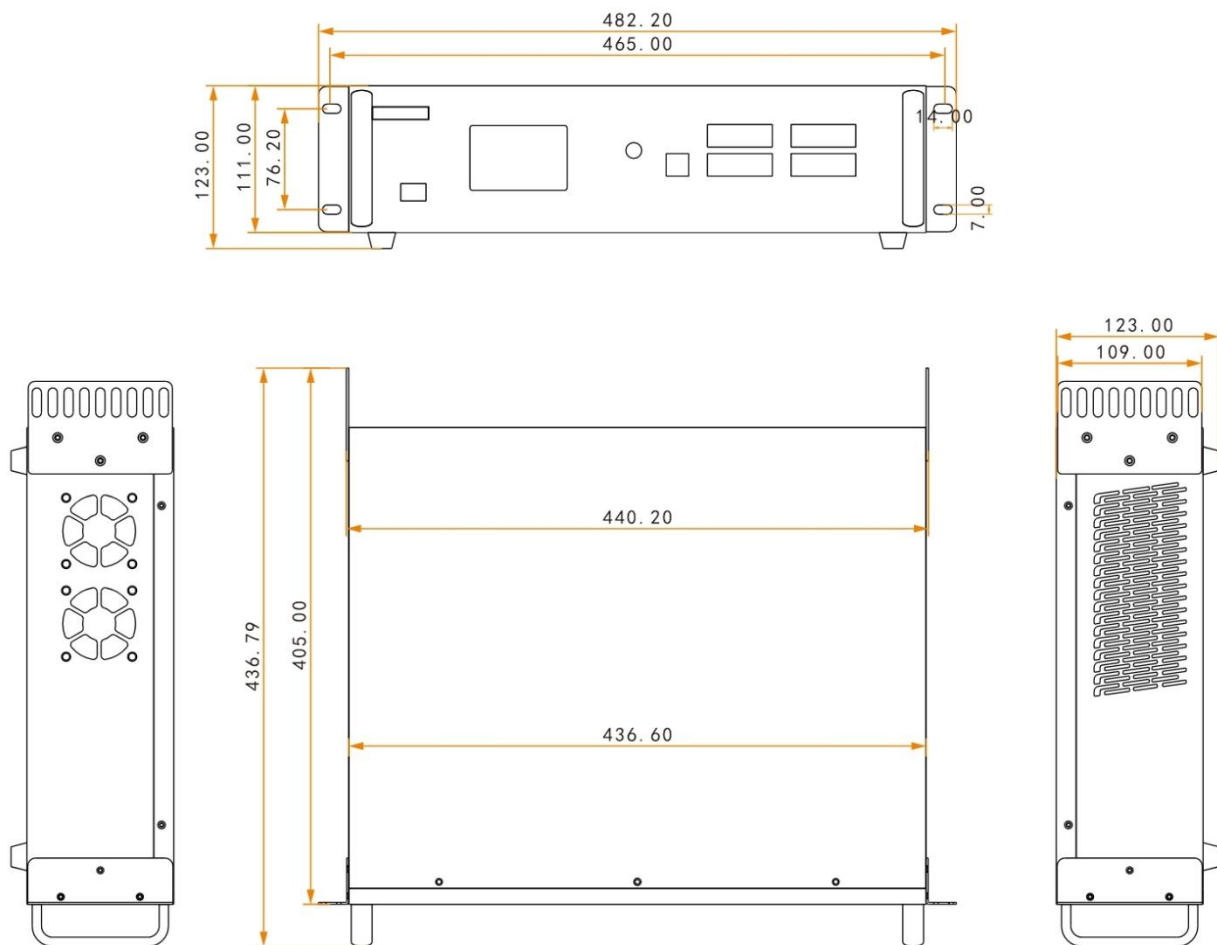
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Input Interface		
Interface Type	QTY	Illustration
HDMI2.0 (HDMI3)	1	Dual-signal input (select one of two) functionality; only one signal can be input at a time. Supports video input up to 3840×2160@60Hz resolution. Supports custom resolutions.
HDMI2.0 (built-in HDMI interface) (HDMI4)	1	Supports audio input and 10-bit audio. Maximum width: 7680 (7680×1080@60Hz) Maximum height: 7680 (1080×7680@60Hz)
HDMI1.4 (HDMI1/HDMI2)	2	Supports video source input up to 2304×1152@60Hz resolution. Supports custom resolutions. Supports audio input. Maximum width: 3840 (3840×640@60Hz) Maximum height: 3840 (640×3840@60Hz) Does not support interlaced signal input.
DVI (DVI1、DVI2)	2	Supports video source input up to 1920×1200@60Hz resolution. Supports custom resolutions. Maximum width: 3840 (3840×640@60Hz) Maximum height: 3840 (640×3840@60Hz) Does not support interlaced signal input.
DP1.2	1	Supports video source input up to 4096×2160@60Hz resolution. Supports custom resolutions. Supports audio input, supports 10-bit audio. Maximum width: 7680 (7680×1080@60Hz) Maximum height: 7680 (1080×7680@60Hz)

Output Interface		
Interface Type	QTY	Illustration
Network Port	40	Maximum load capacity of 26 million pixels, with a maximum width of 16,384 pixels and a maximum height of 16,384 pixels. Supports seamless stitching in any direction—up, down, left, or right.
Optical fiber	4	Maximum load capacity: 20.8 million pixels OPT1 corresponds to ports 1–8; single fiber interface bandwidth: 10Gbit/s OPT2 corresponds to ports 9–16; single fiber interface bandwidth 10Gbit/s OPT3 corresponds to ports 17–24; single fiber interface bandwidth 10Gbit/s OPT4 corresponds to ports 25–32; single fiber interface bandwidth 10Gbit/s No optical modules included by default; purchase and install separately as needed.
AUDIO Interface		
Interface	QTY	Illustration
Audio in	1	3.5mmAudio Interface Input
Audio Out	1	3.5mmAudio Interface Output
Note: 2K signal source has no audio.		
Control Interface		
Interface Type	QTY	Illustration
LAN	1	100M Ethernet Port, Reserved Port
RS232	1	Serial Port
USB-B	1	Configure Port to connect to the PC

Extended Function Interface		
Interface Type	QTY	Illustration
3D	1	Connect the 3D transmitter
Genlock (Optional)	1	Genlock control interface, one input channel, one loop-through output channel
Output Interface		
Interface Type	QTY	Illustration
Power Supply	1	AC-100-240V-50/60HZ AC power interface

5.2 Dimensions



Tolerance: ± 0.3 Unit: mm

6 Product Specification

6.1 Basic Parameters

Loading capacity	Single network port	The maximum load is 655360 pixels, and the network port load is 1280×512 .
	Network Port	26 million Pixels
	Fiber Optic	20.8 million Pixels
Maximum width/height of whole machine	Pixels are controlled within 26 million points Widest: 16384 Highest: 16384	

*When the load height exceeds 8192 points, the overall load capacity gradually decreases with increasing height, but remains no less than 11.98 million points.

6.2 Specification

Electrical parameters	Input voltage	AC-100-240V-50/60HZ
	Rated current	36W
Working environment	Working temperature	0°C~50°C
	Working humidity	5%RH~85%RH has no condensation.
Storage environment	Temperature	-10°C~60°C
Board size	482.2mm×360×111mm	
Net weight	6.43 kg	
Outer packing size	565×445×185mm	
Gross weight of product	8.3 Kg Description: Including wire, accessories	
Packing mode	1 PCS /box	
Accessory	1× Power Cord, 1× USB Cable, 1× DVI Cable, 1× HDMI 2.0 Cable, 1× DP Cable, 1× DP to HDMI Adapter Cable, 1× Certificate of Conformity	

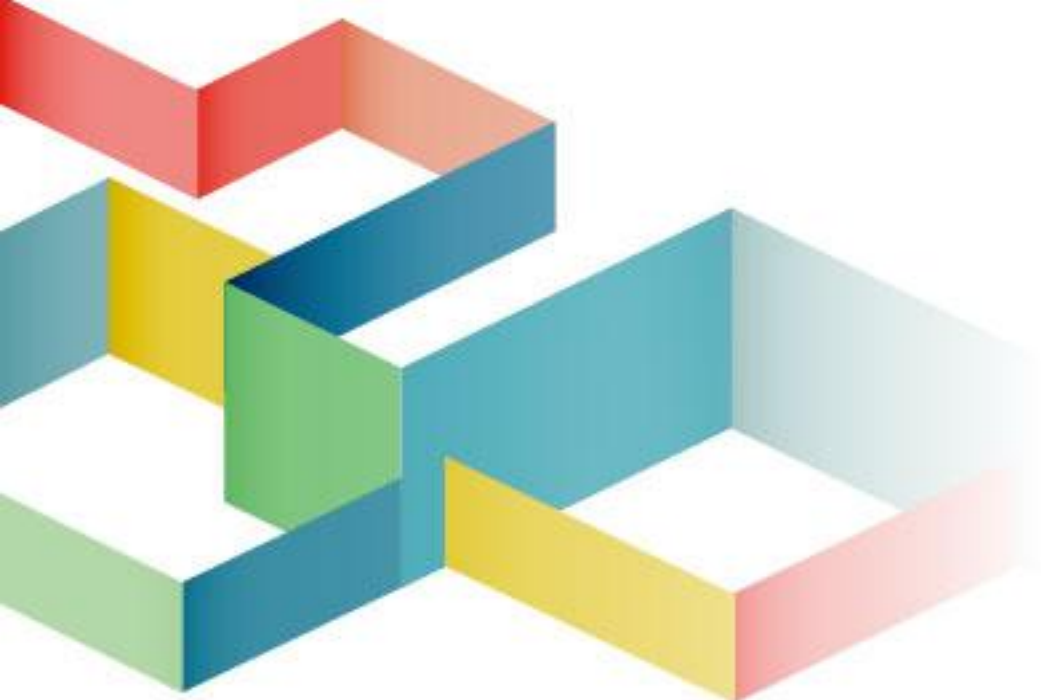
*Current and power consumption may vary depending on factors such as product usage, environment, and settings.

6.3 Video source Characteristics

Input Interface	Color Depth		Maximum input resolution
HDMI2.0	8Bit/10Bit	RGB4:4:4	3840×2160@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	
HDMI1.4	8Bit	RGB4:4:4	2304×1152@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
DP1.2	8Bit/10Bit	RGB4:4:4	3840×2160@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
DVI	8Bit	RGB4:4:4	1920×1200@60Hz
		YCbCr4:2:2	
		YCbCr4:4:4	

7 Precautions

- High voltage hazard: This product operates at AC 100V~240V.
- Do not allow liquids or metal fragments and other conductive materials to enter the device, to prevent safety accidents.
- Please use the device in a dry and clean environment.



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