

X20m

LED Video Controller

Specification V1.0



Overview

X20m 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 13.10 million pixels. Equipped with 20 Gigabit Ethernet ports and 4×10G optical fiber ports (2 active and 2 standby), X20m is able to meet the need of different clients. Additionally, X20m 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 13.10 million pixels.
- 20 Gigabit Ethernet ports output or 4×10 Gigabit optical ports output. (2 active and 2 standby)^①.

Audio

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

Function

- Up to 6-window display, 1 layer per window.^②
- 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.
- 3D display (purchase separately).

^① Ethernet port output and optical port output cannot be used at the same time.

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

- 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

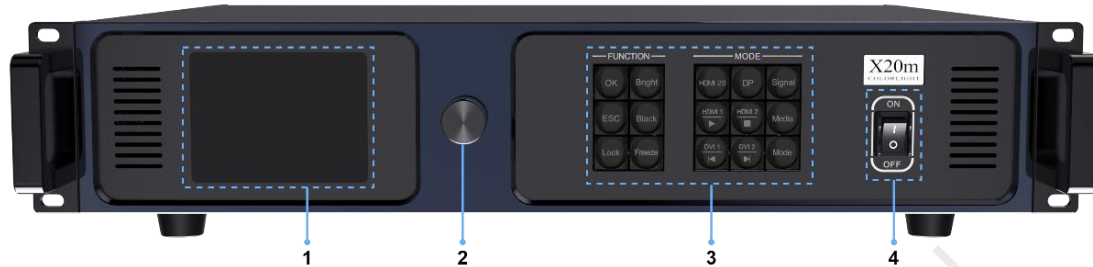
- USB port for control and cascading.
- RS232 protocol.
- LAN port for TCP/IP control.
- Android APP for phones and tablets.

Applications



Appearance

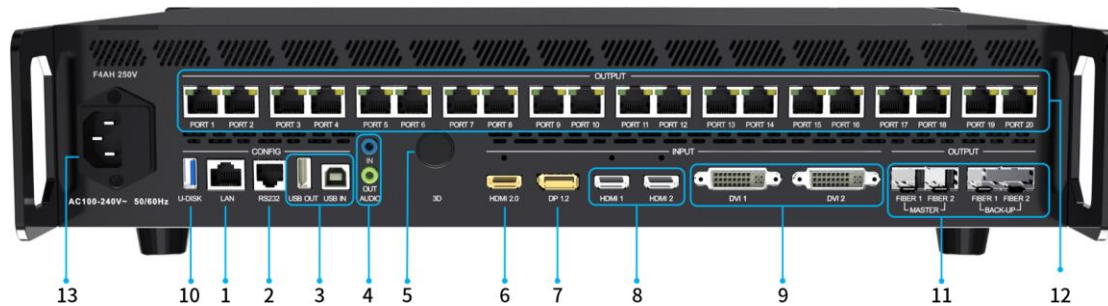
Front panel



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"> • OK: Enter. • Bright: Adjust brightness. • ESC: Exit the current interface. • Black: Black the screen. • Lock: Lock the front panel keys. • Freeze: Freeze the output screen. • HDMI 2.0 / DP/HDMI 1 ▶ / HDMI 2 ■ / DVI 1 ◀ / DVI 2 ▶: <ul style="list-style-type: none"> - Switching to a signal source by clicking corresponding button. - In U-disk playback mode, these buttons serve respectively as play / pause, stop, previous and next. • Signal: View signal status. • Media: Media playback function buttons. • Mode: Choose a preset scene.
4	Power Switch	Switch on / off.

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

Rear panel

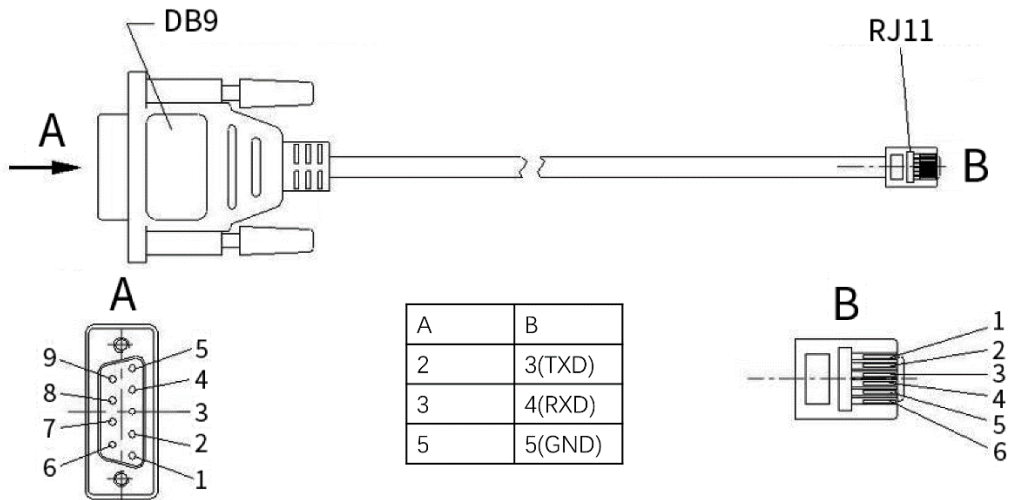


Control		
1	LAN	RJ45 port, connect to a switch for accessing local area network.
2	RS232	*RJ11 port(6P6C), connect to third-party device.
3	USB IN	USB2.0 Type B port, connect to PC for debugging.
	USB OUT	USB2.0 Type A port, as cascading output.
Audio		
4	AUDIO IN	<ul style="list-style-type: none"> Interface type: 3.5mm. Receive audio signals from computers and other equipment.
	AUDIO OUT	<ul style="list-style-type: none"> Interface type: 3.5mm. Support HDMI, DP audio decoding and output audio signals to device such as active speakers.
3D		
5	3D*	4-pin S terminal connector, output 3D sync signal (optional, for use with active 3D glasses).
Input		
6	HDMI 2.0	<ul style="list-style-type: none"> 1×HDMI2.0 input, support HDMI1.4/HDMI1.3. Maximum 4096×2160@60Hz, maximum pixel clock 600MHz. Customized resolution: up to 8192 pixels in width or in height. Support EDID settings. Support audio input.
7	DP 1.2	<ul style="list-style-type: none"> 1×DP1.2 input. Maximum 4096×2160@60Hz, maximum pixel clock 600MHz. Customized resolution: up to 8192 pixels in width or in height. Support EDID settings. Support audio input.

8	HDMI 1, HDMI 2	<ul style="list-style-type: none"> • 2× HDMI1.4 input. • Maximum 1920×1200@60Hz, maximum pixel clock 165MHz. • Customized resolution: up to 4096 pixels in width or in height. • Support EDID settings. • Support audio input.
9	DVI 1, DVI 2	<ul style="list-style-type: none"> • 2× DVI input. • Support 1920×1200@60Hz, maximum pixel clock 165MHz. • Customized resolution: up to 4096 pixels in width or in height. • Support EDID settings.
10	U-DISK	<ul style="list-style-type: none"> • U-disk interface, hot-swappable, support play video / photo playback from U-disk. • USB flash drive format: NTFS, FAT32, exFAT. • Image format: JPEG, BMP, PNG, WEBP, GIF. <ul style="list-style-type: none"> - Maximum image 4096×2160. • Video file: 3GP, AVI, FLV, M4V, MKV, MP4, TP, TS, VOB, WMV, MPEG. <ul style="list-style-type: none"> - Video encoding: MPEG-1 / 2, MPEG-4, H.264/AVC, H.265/HEVC, GOOGLE VP8, MOTION JPEG. - Audio encoding: MPEG Audio, Windows Media Audio, AAC Audio, AMR Audio. - Maximum 4096×2160@60Hz.
Output		
11	FIBER 1, FIBER 2 (MASTER) FIBER 1, FIBER 2 (BACK-UP)	<ul style="list-style-type: none"> • 4×10G Optical interfaces (2 active and 2 standby). <ul style="list-style-type: none"> - FIBER 1 corresponds to PORT 1-10 Gigabit Ethernet ports output. - FIBER 2 corresponds to PORT 11-20 Gigabit Ethernet ports output. • Equipped with 10G single-mode optical module(purchase separately),the device supports dual LC fiber interface (wavelength 1310nm,transmission distance 2 km).
12	PORT 1-20	<ul style="list-style-type: none"> • 20 Gigabit Ethernet ports. <ul style="list-style-type: none"> - One network port load capacity: 655360 pixels, total load capacity is 13.10 million pixels. - Maximum 16384 pixels in width or 8192 pixels in height. • The recommended maximum cable (Cat 5e) run length is 100 meters. • Support redundant backup.

Power supply		
13	Power Socket	AC100-240V, 50 / 60Hz, connect to AC power supply, built-in fuse.

* DB9 female to RJ11(6P6C) cable:



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		

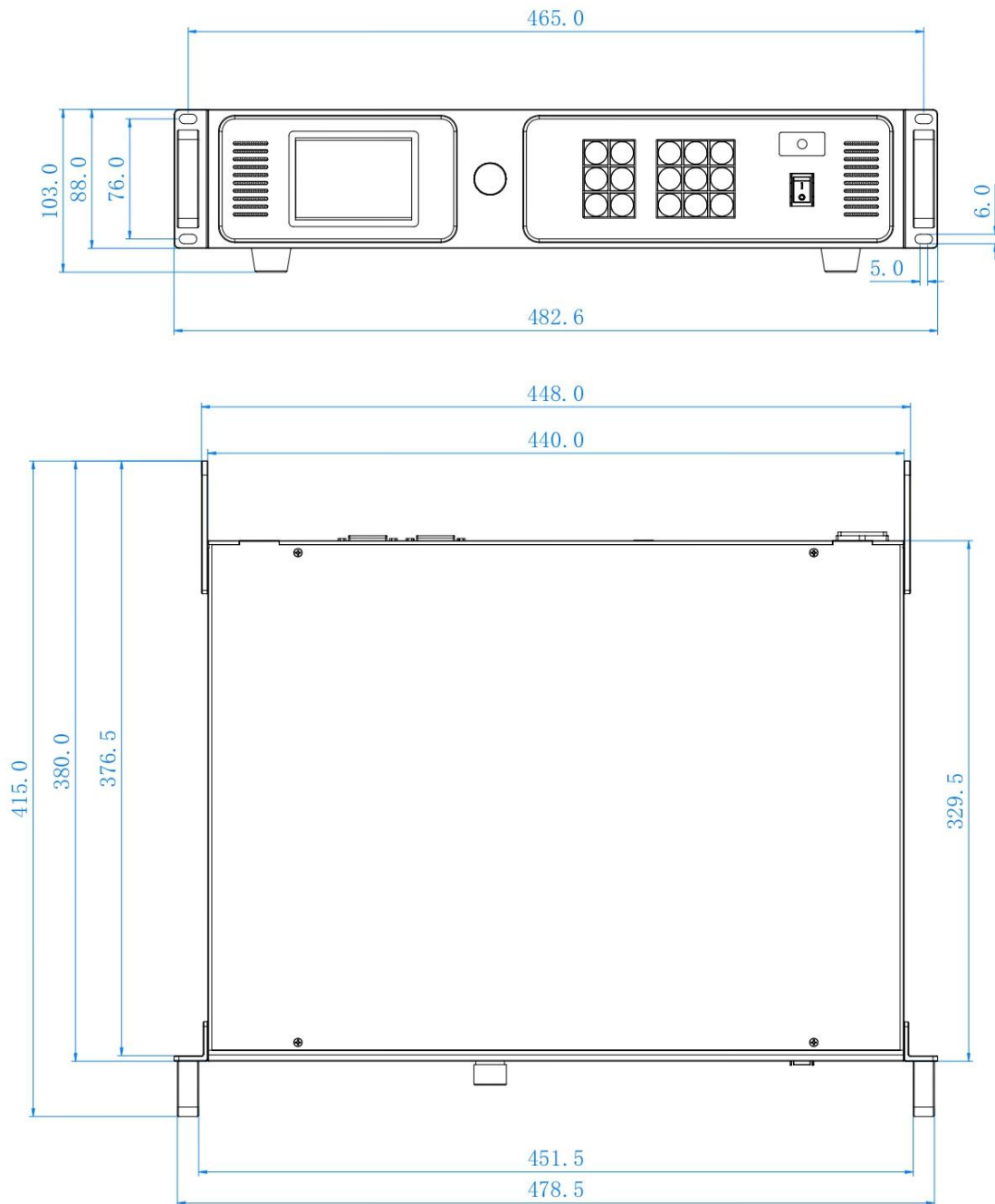
* Only some of the regular resolutions are shown above.

Parameters

Dimensions (W×H×D)	
Unboxed	482.6mm (19") × 103.0mm (4.1") × 415.0mm (16.3"), w/o foot pads.
Boxed	550.0mm (21.7") × 175.0mm (6.9") × 490.0mm (19.3").
Weight	
Net weight	6.20kg (13.67lbs).
Total weight	8.90kg (19.62lbs).
Electrical specification	
Power input	AC100-240V, 2.1A, 50 / 60Hz.
Rated power	80W
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.
Certification	
CCC, CE, FCC, IC, UKCA.	
* If the product does not have the relevant certifications required by the countries or regions 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 caused or Colorlight has the right to claim compensation.	

Reference dimensions


Unit: mm



Statement

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