

X20m/X26m/X40m

LED Video Controller

User Manual V1.2

Contents

Cautions	1
1 Hardware	2
1.1 Front panel	2
1.2 Rear panel	3
2 Hardware connection	6
3 Software operation	7
3.1 Screen settings	7
3.2 Device detection	7
3.3 Input interface	7
3.4 Output settings	8
3.5 Input settings	8
3.6 General settings	9
3.7 Preset and Tour	9
3.8 Subtitle	9
3.9 Virtual pixel	9
3.10 Device settings	10
3.10.1 Basic settings	10
3.10.2 Version	10
3.10.3 Encryption / Decryption	10
4 Troubleshooting	11

Cautions

To prevent personal injury and equipment damage, read and follow the safety precautions below.

Power safety

- Please do not squeeze the power cord and equipment with heavy objects.
- The device must use a grounded power supply.
- There are live parts in the device, non-professionals are not allowed to disassemble the device without permission to avoid electric shock.
- Please do not disassemble the device when it is powered on or running to avoid the risk of electric shock.
- Please turn off the main power of the device when it is not in use for a long time in a humid environment.
- When the device is not in use, please disconnect the power supply from the device and unplug the power plug from the power outlet.

Operational safety

- Please do not place the device on an unstable surface to avoid the device falling and causing damage, which may cause serious personal injury or death.
- Please do not operate with wet hands to prevent electric shock.
- Please do not use the product in an environment containing flammable substances, explosive gases or heat sources.
- Please do not spill any corrosive chemicals or liquids on or near the equipment.
- Please check and test before using it if the equipment is stored for a long time.
- Please power off the device and use a dry rag to clean the device before cleaning the device.
- Please do not block the heat dissipation holes, and keep the working environment well ventilated, so that the heat generated by the equipment during operation can be discharged in time, so as to avoid equipment damage caused by poor heat dissipation.
- Please use appropriate packaging or original packaging during transportation in order to prevent the equipment from being damaged by strong vibration during transportation.
- Please be careful not to drop the equipment to avoid personal injury or equipment damage when carrying the equipment.

FCC statement

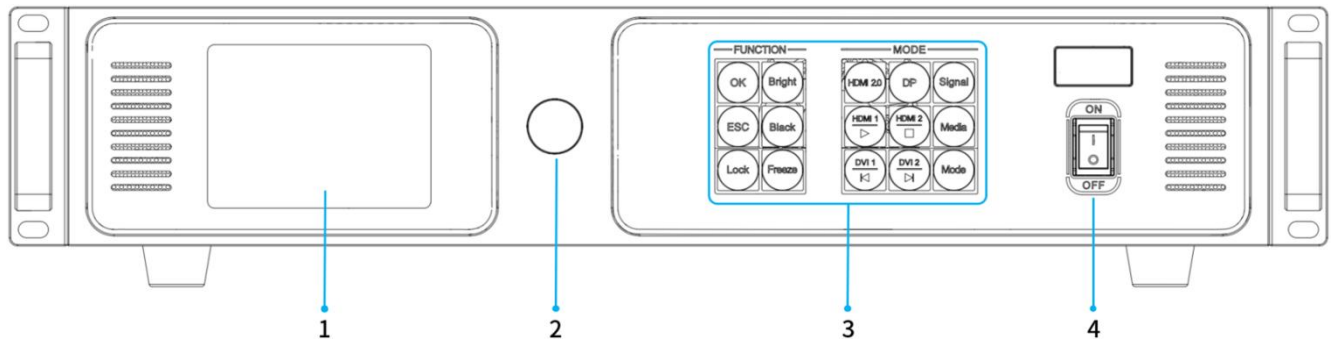
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Environmental protection

- Please do not dispose of this device and its accessories as ordinary household waste. Discarded equipment should be treated as industrial waste, and incineration is strictly prohibited.

1 Hardware

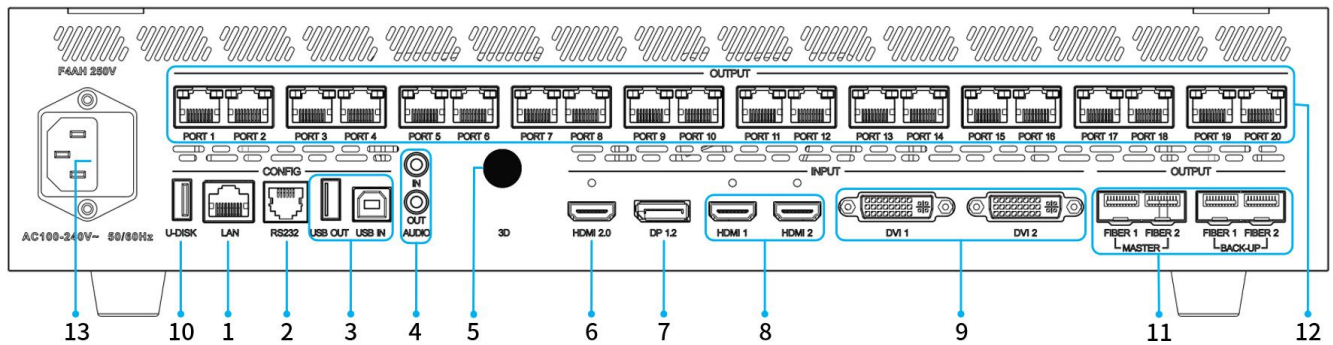
1.1 Front panel



No	Item	Function
1	LCD	Display the operation menu and system information.
2	Knob	Select an item or adjust the parameter, press the knob to confirm your selection or adjustment.
3	Function key	<ul style="list-style-type: none"> • OK: Confirm button. • Bright: Tune brightness. • ESC: Exit the current operation or back to previous menu. • Black: Black screen. • Lock: Lock all the keys of the front panel. • Freeze: Freeze screen. • HDMI 2.0 / DP / HDMI 1 / HDMI 2 / DVI 1 / DVI 2 : Switching to a signal source by clicking corresponding button. - Click the button can switch directly the corresponding signal. - In U-disk playback mode, these buttons serve respectively as play / pause ►, stop ■, previous ◀ and next ▶. • Signal: Input source information. • Media: Media playback function buttons. • Mode: Select a preset.
4	Power button	Switch On / Off.

* This picture takes X20m LED video controller as an example, and the equipment shown in the picture is for reference only.

1.2 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 a PC for debugging or cascading input.
	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 devices such as active speakers.
3D		
5	3D*	<ul style="list-style-type: none"> 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, Minimum 800×600@60Hz, Maximum pixel clock 600MHz. <ul style="list-style-type: none"> Maximum 8192 (8192×1080@60Hz) in width. Maximum 8192 (1080×8192@60Hz) in height. Support independent EDID settings, using EDID V1.3 standard. Support audio input. HDR is not supported. De-interlaced signal input not supported.
7	DP 1.2	<ul style="list-style-type: none"> 1× DP1.2 port. Maximum 4096×2160@60Hz, Minimum 800×600@60Hz, Maximum pixel clock 600MHz. <ul style="list-style-type: none"> Maximum 8192 (8192×1080@60Hz) in width. Maximum 8192 (1080×8192@60Hz) in height. Support independent EDID settings, using EDID V1.3 standard. Support audio input. HDR is not supported.

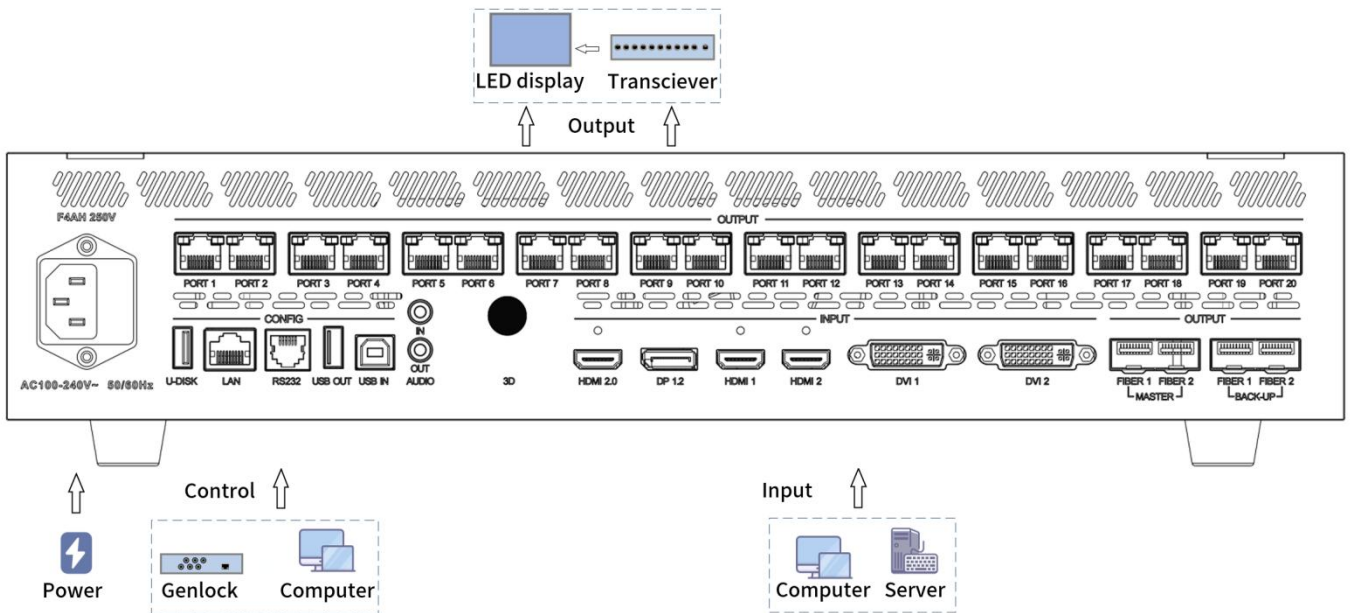
		<ul style="list-style-type: none"> • De-interlaced signal input not supported.
8	HDMI 1, HDMI 2	<ul style="list-style-type: none"> • 2× HDMI1.4 input. • Maximum 1920×1200@60Hz, Minimum 800×600@60Hz <ul style="list-style-type: none"> - Maximum 4096 (4096×512@60Hz) in width. - Maximum 4096 (512×4096@60Hz) in height. • Support independent EDID settings, using EDID V1.3 standard. • HDCP1.4 compliant, backwards compatible. • Support audio input. • De-interlaced signal input not supported.
9	DVI 1, DVI 2	<ul style="list-style-type: none"> • 2× DVI input. • Maximum 1920×1200@60Hz, Minimum 800×600@60Hz <ul style="list-style-type: none"> - Maximum 4096 (4096×512@60Hz) in width. - Maximum 4096 (512×4096@60Hz) in height. • Support independent EDID settings, using EDID V1.3 standard. • HDCP1.4 compliant, backwards compatible. • De-interlaced signal input not supported.
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@60Hz. • 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	MASTER (FIBER 1, FIBER 2) BACK-UP (FIBER 1, FIBER 2)	<ul style="list-style-type: none"> • X20m: 4× 10G Optical interfaces (2 main and 2 backup). <ul style="list-style-type: none"> - MASTER FIBER 1 corresponds to PORT 1-10 Gigabit Ethernet ports output. - MASTER FIBER 2 corresponds to PORT 11-20 Gigabit Ethernet ports output. - BACK-UP FIBER 1 is the backup for MASTER FIBER 1. - BACK-UP FIBER 2 is the backup for MASTER FIBER 2. • X26m: 3× 10G Optical interfaces. <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. - FIBER 3 corresponds to PORT 21-26 Gigabit Ethernet ports output. • X40m: 4× 10G Optical interfaces. <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. - FIBER 3 corresponds to PORT 21-30 Gigabit Ethernet ports output. - FIBER 4 corresponds to PORT 31-40 Gigabit Ethernet ports output.

		<ul style="list-style-type: none"> • It needs to be used with 10G single-mode optical module (Purchase separately), supports dual LC fiber interface, wavelength 1310nm, transmission distance 2 km.
12	PORT 1-20 PORT 1-26 PORT 1-40	<ul style="list-style-type: none"> • X20m/X26m/X40m load capacity per port: 655,360 pixels. • X20m/X26m/X40m load capacity per port: <ul style="list-style-type: none"> - Output 8bit@60Hz: 0.65 megapixels. - Output 8bit@120Hz: 0.32 megapixels. - Output 8bit@240Hz: 0.16 megapixels. • X20m: 20 Gigabit Ethernet ports. <ul style="list-style-type: none"> - Total load capacity: 13.10 million pixels, with maximum 16,384 pixels in width and maximum 8,192 pixels in height. • X26m: 26 Gigabit Ethernet ports. <ul style="list-style-type: none"> - Total load capacity: 17.03 million pixels, with maximum 16,384 pixels in width and maximum 8,192 pixels in height. • X40m: 40 Gigabit Ethernet ports. <ul style="list-style-type: none"> - Total load capacity: 26.21 million pixels, with maximum 16,384 pixels in width and maximum 8,192 pixels in height. • The recommended maximum cable (CAT5e) run length is 100 meters. • Support redundant backup.
Power		
13	MAINS INPUT	AC100-240V, 50 / 60Hz, connect to AC power supply, built-in fuse.

* This picture takes X20m LED video controller as an example, and the equipment shown in the picture is for reference only.

2 Hardware connection

Before using the equipment, please connect the **input, output and control interfaces** according to the hardware interface, and finally connect the **power supply**.



Network port output: When selecting the network port output, you can connect to the LED display through the network cable.

Optical port output: When selecting the optical port output, the optical port is first connected to the optical fiber transceiver (purchase separately), then connected to the LED display screen through the Network cable.

* This picture takes X20m LED video controller as an example, and the equipment shown in the picture is for reference only.

3 Software operation

Please use Colorlight's LEDVISION software to configure the screen and set up the device.

- Please make sure the LED screens were set up with correct receiver cards parameters.
- Before setting the parameters, ensure that the hardware is connected correctly, which means the sender and all receiver cards can be detected via software.
- Please visit www.colorlightinside.com to download LEDVISION.

3.1 Screen settings

Run Colorlight's LEDVISION software, choose **Control**>**Led Screen Settings** (enter the authorized password **168** or **777**.)

- On the **Sending Device** tab page, select **Sender** as sending device and click **Detect Senders**.
- On the **Detect Receivers** page, click **All**.
- Enter the **Receiver Mapping (Look From Front)**, add corresponding number and size of receiver cards for each port probed.
- Click a **port index**, and add connectivity relationship of receiver cards, according to its actual panel connections.
- Send the connectivity relationship to the screen, and check its display. Save if the display is correct.
 - * If the screen doesn't display properly, double check, send and save the connectivity relationship.

3.2 Device detection

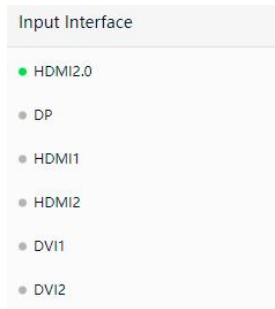
Open the browser and enter the IP address: 192.168.1.10 to enter the VideoStation Web Login interface and set up the display for the device.

- Enter the account number and password (initial account number is 123456 and initial password is 123456) and click **Login** to enter the VideoStation Web operation interface, and the device name will be identified automatically.
 - * If the device is not detected, please check whether the network cable is connected properly and the relevant driver is installed correctly.
 - * When connecting via PC network cable, it may be necessary to configure the corresponding IP address on the PC.

3.3 Input interface

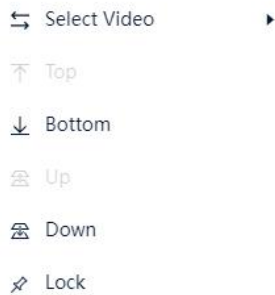
Check current video source information in the **Input Interface** list on the left side of the **canvas view** interface.

- **Input Interface** displays current input ports, when an interface has signal input, it will display ● (green light).



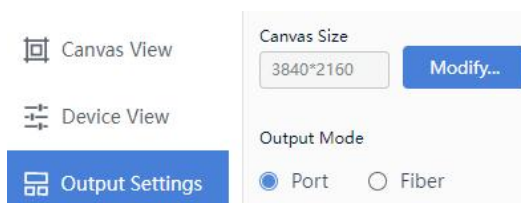
Drag and drop a signal source from the **input interface** into the canvas on the right, it will display corresponding source window.

- Right-click a source window and in the pop-up menu, switch the source of the window, set the layer position and window size as required.



3.4 Output settings

In the **Output Settings UI**, you can modify the **Canvas Size** and edit the device **Output Mode**.



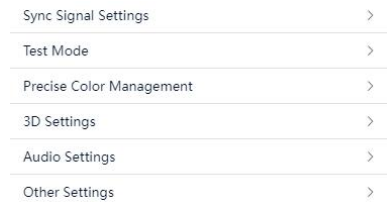
3.5 Input settings

In the **Device View**, select an input source from the device rear panel image, and set its **Input Format**, **EDID Settings**, **Cropping**, etc.



3.6 General settings

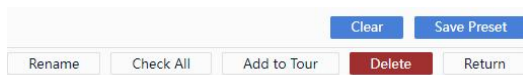
In the **Device View**, select the equipment (click on the picture other than input / output area), you can set up **Sync Signal Settings**, **Test Mode**, **Precise Color Management**, **3D Settings**(optional), **Audio Settings** and **Other Settings**.



3.7 Preset and Tour

Enter the **Canvas View** to set the input source and click **Save Preset**.

- Click Edit, choose the preset you want to add to the tour and click Add To Tour.



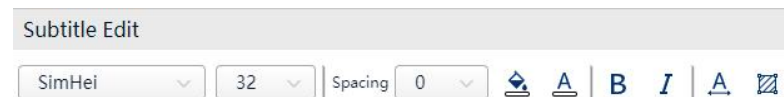
- Click Tour, set the Tour Interval and click Start.



3.8 Subtitle

Click **Subtitle** in the menu bar at the top of the interface, it is allowed to edit the subtitle position and scroll speed.

- Click **Edit** to edit font size, font weight, word spacing, color, etc., and **save** it after editing.



3.9 Virtual pixel

Click **Virtual Pixels** to set triple virtual and quadruple virtual status. You can also select the route of row offset and column offset.



3.10 Device settings

3.10.1 Basic settings

In the **Basic settings**, you can set the **device name** and **device IP**, **import and export device parameters**, **restore factory settings**.

3.10.2 Version

In the **Version UI**, you can check out the firmware version, **upgrade device**, **update font** and **upgrade LOGO**.



3.10.3 Encryption / Decryption

On the top panel, click , select **Authorization** and enter **168**.

- Select **Device Settings**>**Encryption / Decryption** to **encrypt** and **decrypt** the device, you can also **Synchronize Network Time** as required by encryption.

4 Troubleshooting

Problem	Possible Cause	Remedy
No image display on the LED screen.	Poor power contact.	Check the power connector and make sure the good contact.
	Device power off.	Make sure the POWER button on.
Poor image quality such as "double image."	Unqualified HDMI cable.	Replace with high quality cable.
	HDMI cable too long.	Lower the signal resolution or shorten the cable.
No image output after signal switching.	No signal source input for the channel after switching.	Check the proper signal input.
	Poor cable contact.	Check the input and output cable and ensure a good contact.
Unable to use.	Internal damage of the device.	Contact Technical Support.

Statement

Copyright © 2024 Colorlight Cloud Tech Ltd. All rights reserved.

No part of this document may be copied, reproduced, transcribed, or translated without the prior written permission of Colorlight Cloud Tech Ltd, nor be used for any commercial or profit-making purposes in any form or by any means.

This guide is for reference only and does not constitute any form of commitment. Please refer to the actual products (including but not limited to color, size, screen display, etc.).

Service Phone

4008 770 775

Colorlight Cloud Tech Ltd

Official Website: www.colorlightinside.com

Head Office Address: Room 37F-39F, Building 8, Zone A,

Shenzhen International Innovation Valley, Vanke Cloud City, Dashi Yilu,

Nanshan District, Shenzhen, China

