# Colorlight 

## X12

## LED Video Controller

Specification v1.2

## Overview

X12, a professional control system and video processing device designed for LED display engineering applications. It has DVI and HDMI connectors, and supports seamless switching between multiple signals, broadcast quality scaling and multiwindow display. The controller boasts 12 Gigabit Ethernet ports. A single unit features a loading capacity of 7.8 million pixels, with 8192 pixels in maximum width or 4096 pixels in maximum height. Meanwhile, the X12 is equipped with abundant practical functions that enable flexible screen control and high-quality image display, which gives it an edge in the LED display engineering application field.

## Features

- Input: $1 \times$ DVI, $3 \times$ HDMII.4.
- Input resolution: up to $1920 \times 1200 @ 60 \mathrm{~Hz}$, supporting customized setting.
- Output: $12 \times$ Gigabit Ethernet ports, supporting Ethernet port backup or sender backup.
- Loading capacity: 7.8 million pixels, up to 8192 pixels in width or 4096 pixels in height.
- Switching, cropping, splicing and scaling of video sources.
- Display of up to 3 windows, of which the location and size can be freely adjusted
- HDCP1.4 compliant.
- Dual USB2.0 for high-speed configuration, used for debugging or cascading.
- Support RS232 protocol
- Brightness, color temperature, contrast, hue and saturation adjustment.
- Better gray at low brightness.


## Hardware

## Front



| No. | Item | Function |
| :---: | :---: | :---: |
| 1 | LCD | Display the operation menu and system information. |
| 2 | Knob | - Turn the knob to select an item or adjust the parameter. <br> - Press the knob to confirm your selection or adjustment. |
| 3 | Function Keys | - OK: Enter key. <br> - ESC: Exit the current menu or operation. <br> - Bright: Brightness adjustment. <br> - Lock: Lock all the keys of the front panel. <br> - Part: Cropping. <br> - Mode: Mode selection. <br> - 1~4: Preset scene quick selection keys. |
| 4 | Video Signal Selection Keys | HDMI1 / HDMI2 / HDMI3 / DVI: Video source selection keys. |
| 5 | Power Switch | Switch on or off the power supply. |

Rear


| Input |  |
| :---: | :---: |
| HDMI1~3 | - $3 \times$ HDMI inputs, support audio input. <br> - HDMI1.4 specification, input resolution up to $1920 \times 1200 @ 60 \mathrm{~Hz}$. |
| DVI | - $1 \times$ DVI input. <br> - DVI specification, input resolution up to $1920 \times 1200 @ 60 \mathrm{~Hz}$. |
| Output |  |
| Port1-12 | - RJ45, $12 \times 1$ Gigabit Ethernet outputs. <br> - Single channel maximum capacity of 0.65 million pixels. <br> - X12 maximum capacity of 7.8 million pixels. |
| Control |  |
| RS232 | RJ11(6P6C)*, connect to the third party device. |
| USBIN | USB input, connect to the PC for debugging. |
| USB OUT | USB output, as cascading output. |
| Audio |  |
| AUDIO IN | Audio input, for inputting audio signals from the computer or other devices. |
| AUDIO OUT | Audio output, for outputting audio signals to the speaker (Support processing and outputting the audio signals of HDMI) |
| Power Supply |  |
| AC 100~240V | AC 100~240V, built-in fuse |

* DB9 female to RJ11(6P6C) cable:


Parameters

| Model |  | X 12 |
| :---: | :---: | :--- |
| Size |  | 2 U |
| Electrical | Input Voltage | $\mathrm{AC} 100 \sim 240 \mathrm{~V}, 50 \sim 60 \mathrm{~Hz}$ |
| Specification | Power | 30 W |
| Operating | Temperature | $-30^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C} /-22^{\circ} \mathrm{F} \sim 140^{\circ} \mathrm{F}$ |
| Environment | Humidity | $0 \% \mathrm{RH} \sim 80 \% \mathrm{RH}$, non-condensing |
| Storage | Temperature | $-40^{\circ} \mathrm{C} \sim 80^{\circ} \mathrm{C} /-40^{\circ} \mathrm{F} \sim 176^{\circ} \mathrm{F}$ |
| Environment | Humidity | $0 \% \mathrm{RH} \sim 90 \% \mathrm{RH}$, non-condensing |
| Device | Dimensions | $\mathrm{W} \times \mathrm{H} \times \mathrm{L} / 482.6 \times 88.0 \times 369.2 \mathrm{~mm}^{3} / 19{ }^{\prime \prime} \times 3.5^{\prime \prime} \times 14.5$ |
| Specification | Net Weight | $4.6 \mathrm{~kg} / 10.1 \mathrm{lbs}$ |
| Packing | Dimensions | $\mathrm{W} \times \mathrm{H} \times \mathrm{L} / 525.0 \times 150.0 \times 455.0 \mathrm{~mm}^{3} / 20.7^{\prime \prime} \times 5.9^{\prime \prime} \times 1$ |
| Specification | Net Weight | $1.6 \mathrm{~kg} / 3.53 \mathrm{lbs}$ |

Signal format

| HDMI 1.4 |  |  |  |
| :---: | :---: | :---: | :---: |
| Standard | HDMI 1.4 specification, support HDCP |  |  |
| Input | Format | - | Maximum Input Resolution |
|  | 8bit | RGB444 | $1920 \times 1200 @ 60 \mathrm{~Hz}$ |
|  |  | YCbCr444 |  |
|  |  | YCbCr422 |  |
|  | Frame Rate | 23.98/24/25/29.97/30/50/59.97/60Hz |  |
|  | Support audio input |  |  |
| DVI |  |  |  |
| StandardInput | Support HDCP |  |  |
|  | Format |  | Maximum Input Resolution |
|  | 8bit | RGB444 | $1920 \times 1200 @ 60 \mathrm{~Hz}$ |
|  |  | YCbCr444 |  |
|  |  | YCbCr422 |  |
|  | Frame Rate | 23.98/24/25/29.97/30/50/59.97/60Hz |  |

## Reference Dimensions

Unit: mm


## Statement

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