



KLS24

2-in-1 video controller

Specifications

Version: V2.0.0

Release date: May 2024

Update history

Document Version	Release Data	Revision Notes
V1.0.0	2021-03-17	First version released
V1.1.0	2021-10-25	Modify the cover
V1.2.0	2021-11-18	Correct size data
V1.3.0	2022-02-25	Fix control port type and description
V1.4.0	2023-07-12	Replacing the 4K daughter card with a DP daughter card
V2.0.0	2024-05-28	Completely new upgrade
V2.0.1	2024-06-01	Update overview and features

Overview

KLS24 two-in-one video controller is a professional video processing and control equipment developed by Kystar Technology for large-scale small-pitch LED screens. It has a pure hardware FPGA design architecture. It can be widely used in TV stations, dispatch rooms, command centers, exhibition halls, conference rooms, stage performances, data centers, multi-function halls and other scenarios.

Features

- Pure hardware FPGA architecture: no CPU, no core, no risk of poisoning and crash, the system runs stably; supports 365×24 hours of continuous operation.
- The stand-alone machine has 24 network port outputs, and a single network port can carry 650,000 pixels; the whole machine can carry a maximum of 15.6 million pixels, with a maximum width of 40,960 points and a maximum height of 40,960 points.
- Multi-window display, the whole machine can display up to 16 windows at the same time, the pictures can be displayed across the output network ports, support any superposition, and the size can be set at any time.
- Equipped with 4K@60Hz module, it supports DP1.2 input and HDMI2.0 input, and 2 channels of 4K can be displayed on the screen at the same time; the maximum resolution supports 4096×2160@60Hz or 7680×1200@60Hz.
- Within the loading range of the device, the network ports can be arranged arbitrarily.
- No need install software, it is controlled via the Web, and is not restricted by operating systems and operating platforms.
- The LCD embedded in the front panel of the device is a 4.3-inch multi-touch capacitive LCD screen, which supports functions such as setting the parameters of the device network IP and central control serial port, viewing the device firmware version, calling scenes, and viewing the device hardware status.
- Different preset parameters can be saved as scenes, and multi-screen scenes and single-screen scenes can be called with one click and switched easily.
- Supports up to 8 groups of screen management, and the output resolution of each group of screens can be set separately, easily completing display control of special-shaped screens and complex scenes.
- It supports overlaying text on layers, and subtitles can be displayed statically or dynamically scrolling. Users can set the background color, scrolling style, etc. of the subtitles.
- Supports pre-editing management, and layer editing does not affect the current device output.
- No additional monitoring board is required, and the web terminal supports input real-time preview.
- Supports input source polling and regular switching of multiple input sources.
- Supports scene loop to meet unsupervised application scenarios.
- It supports the input source station logo, embeds characters in each input signal, and identifies the input signal. The screen displays the input signal and displays the embedded characters at the same time.
- Supports seamless switching. When switching layers' signals or calling plans, there will be no black screen, no flickering, and no lag in the entire process.
- Supports hardware monitoring, including real-time monitoring of the temperature and voltage of each hardware module, firmware version, operating status, fan speed, etc.
- Supports remote upgrade, program upgrade can be performed remotely, and system maintenance is simple.

Appearance

Front panel



Rear panel



*The product pictures in this article are for reference only, please refer to the actual product purchased.

Input port		
Type	Quantity	Specification
DP1.2	1	<ul style="list-style-type: none"> Maximum input resolution:4096×2160@60Hz or 7680×1200@60Hz Custom resolution:limit width 7680 (7680×1200@60Hz) limit height 7680 (1200×7680@60Hz) Video input format:RGB444, YCbCr444, YCbCr422 Support accompanying audio
HDMI 2.0	1	<ul style="list-style-type: none"> Maximum input resolution:4096×2160@60Hz or 7680×1200@60Hz Custom resolution: limit width 8192 (8192×1080@60Hz) limit height 8192 (1000×8192@60Hz) Video input format:RGB444, YCbCr444, YCbCr422 Support accompanying audio
HDMI1.3	4	<ul style="list-style-type: none"> Maximum input resolution:1920×1200@60Hz Custom resolution: limit width 2048 (2048×1152@60Hz) limit height 2048 (1152×2048@60Hz) Video input format:RGB444, YCbCr444, YCbCr422

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| | | <ul style="list-style-type: none"> Support accompanying audio |
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Output port

Type	Quantity	Specification
LAN	24	<ul style="list-style-type: none"> LAN port, used to transmit data to the receiving card, Single network port can carry up to 650,000 pixels, with a maximum width of 4096 and a maximum of 4096. The whole machine can carry a maximum of 15.6 million pixels, with a maximum width of 40960 and a maximum of 40960.

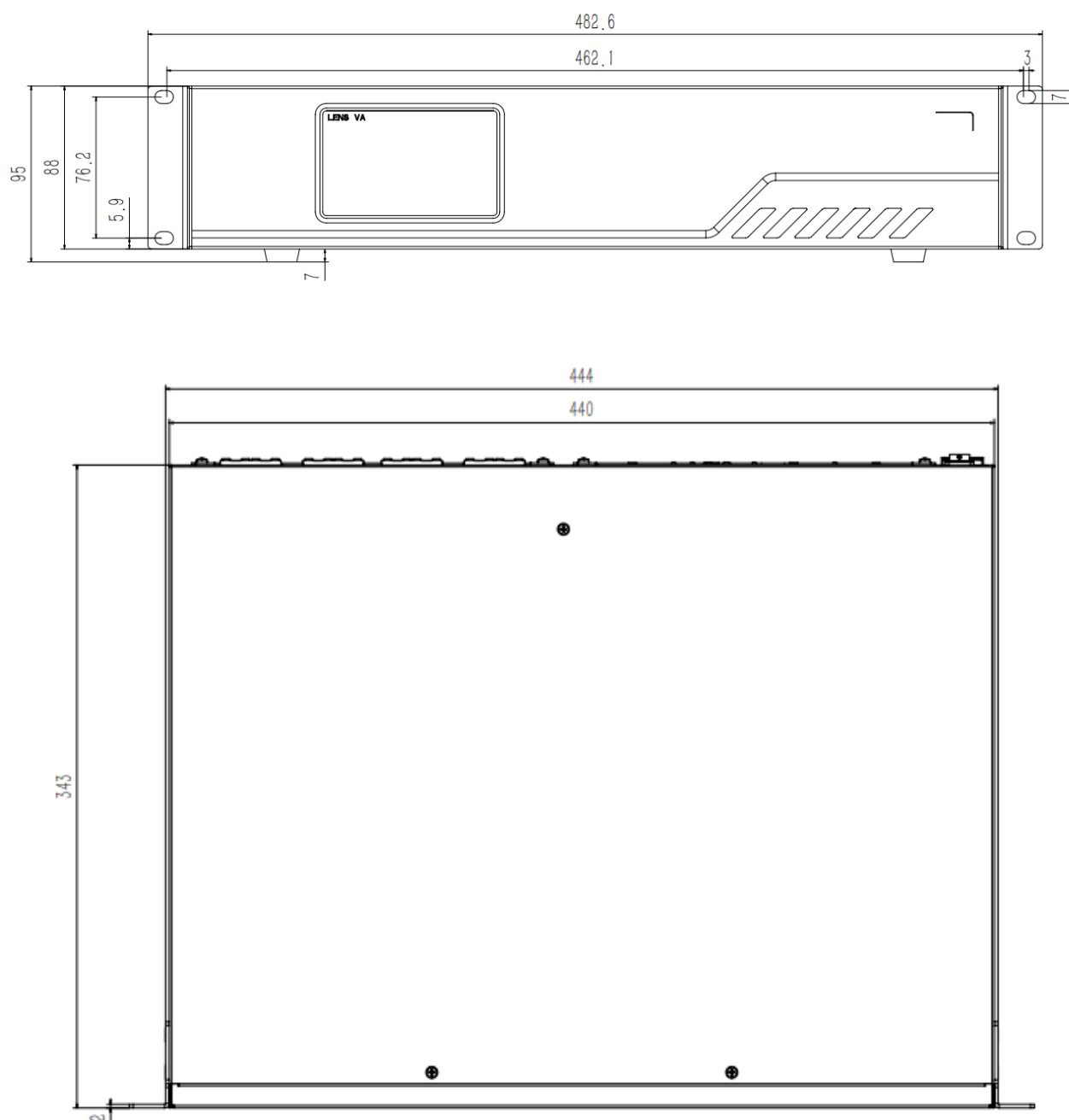
Control port

Type	Quantity	Specification
RJ-11(RS-232)	2	RS232 control port, can be connected with the central control system
USB	1	USB3.0 interface is only used for system upgrades and cannot be used to power other devices.
ETHERNET	1	Gigabit network port, communication interface, connected to control computer, router or switch for Web control and preview

Machine specifications

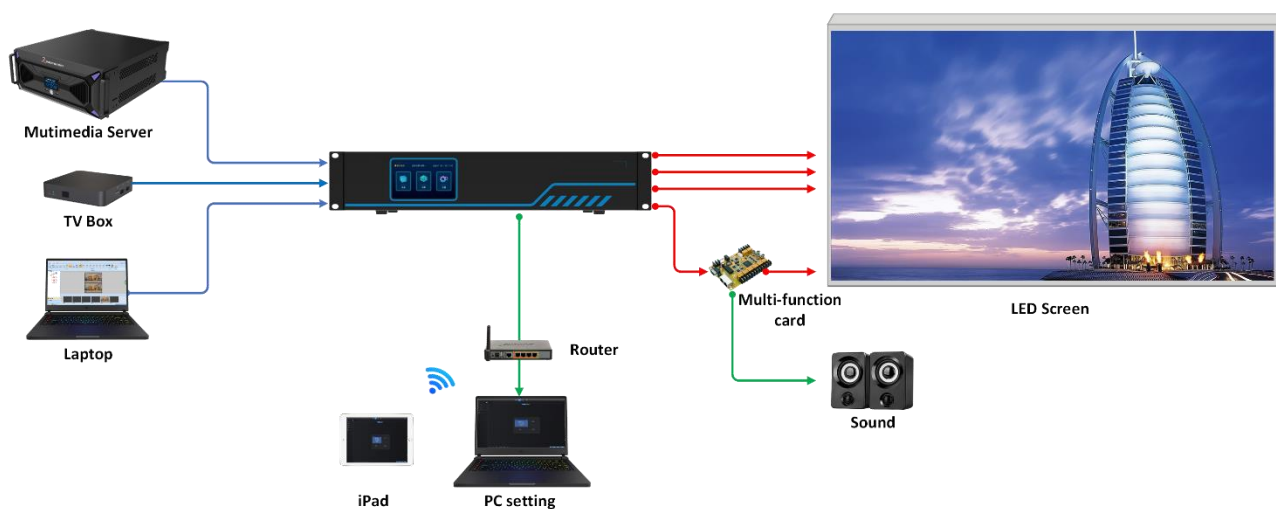
Model	KLS24
Chassis specifications	2U
Input interface	1xDP1.2、1xHDMI2.0、4xHDMI1.3
Number of output network ports	24
Maximum number of layers	16
Input power	110-240V~, 47-63Hz, 1A
Overall power consumption	160W
Working environment	0~45°C, 0%RH~80%RH, No condensation
Storage environment	-20°C~65°C, 0%RH~95%RH, No condensation
Dimensions	482.6mm×343mm×95mm (L×W×H)
Package size	500mm×450mm×260mm (L×W×H)
Net weight	8KG
Gross weight	9KG

Dimensions



Unit: mm. Linear and angular dimensional tolerances not noted conform to GB/T1804-M.

Application Scenario



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solution provider and operation service provider

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WeChat