



KLS12c Specification

2-in-1 Video Controller



Version: v3.0

Release Date: June 2025

Revision History

Serial Number	Summary of the revisions	Revision Date	Revised by
1	Initial release	2024/11/14	
2	Modify the relevant function description and format	2025/04/27	
3	Organize and update document format	2025/06/13	

Safety Instructions

This chapter introduces the safety instructions for the 2-in-1 controller KLS12c to ensure the safety of product storage, transportation, installation, and use.

Safety instructions apply to all persons who come into contact with and use the product.

First, please note the following points

- Please read all instructions.
- Please retain all instructions.
- Please follow all instructions.

Storage and transportation safety

- Please pay attention to dust and water protection.
- Please avoid prolonged direct sunlight.
- Keep away from heat and fire sources.
- Do not place in explosive gas environment.
- Do not place in a strong electromagnetic environment.
- Please place the product in a stable location to prevent it from falling and causing product damage or personal injury.
- Please save the box and packaging materials. They can be used when storing and transporting the product. For maximum protection of the device,
- Please repack the product in its original factory packaging.

Safe installation and use

- Only trained professionals can install the product.
- It is forbidden to plug or unplug while the power is on.
- Please ensure that the box is safely grounded.
- Please wear anti-static wrist guard and insulating gloves.
- Do not install the product in an environment with frequent or strong vibrations.
- Please dust regularly.
- Please do not repair the product without authorization. You can contact after-sales at any time.
- Please use the same product for spare parts replacement

Overview

Kystar KLS12c 2-in-1 controller supports 5 -way digital signal input, has 12 network port outputs, and can load up to 7.8 million pixels. It adopts pure hardware FPGA architecture and can run continuously for 365 × 24 hours, meeting the configuration requirements of large-screen control systems for small-pitch applications.

Certification Information

CQC

If the product has no relevant certification in any country or region, please contact us immediately for confirmation or processing. Otherwise, if any legal risks are caused, the customer shall bear them by himself or our company shall have the right to seek compensation.

Features

- The single machine has 12 network ports, each port can load 650,000 pixels, and the maximum load of the whole machine is 7.8 million pixels. The width can reach 12270 points and the height can reach 4090 points.
- Supports multiple digital signal interfaces, including 2*HDMI1.3 , 1*DVI-D , 1*HDMI-1.4 and 1*DP1.1 input sources.
- Supports 3-screen display with arbitrary screen positions.
- Supports arbitrary stringing, the network port load is not restricted by rectangle, and the utilization rate of the network port is improved.
- It supports self-output of test images such as pure color, gradient, scan line, etc., which is convenient for on-site debugging and testing.
- EDID configuration management: supports reading, modifying and customizing EDID (Extended Display Identification Data).
- Supports one-click black screen/still function.
- Black edge removal/cropping function: solve the black edge problem generated by the front-end signal, and perform arbitrary cropping for any signal source (still keep the full screen state)
- Support key lock to prevent accidental operation.

- The brightness and contrast of the overall output image can be adjusted in real time and quickly.

Front and Rear Panel Diagram



*The product images in this article are for reference only. Please refer to the actual product purchased.

Name	Illustrate
Switch	Power switch of the device
LCD screen	Displays the current status and menu of the device.
Knobs	<ul style="list-style-type: none"> • Press the knob to confirm the selection or enter the menu interface • Rotate the knob to select menu options or adjust parameters
Function shortcut keys	<ul style="list-style-type: none"> • ESC: Click to exit the current interface • F/N: Click to enter the common function interface
Signal switch key	<ul style="list-style-type: none"> • DVI: Click to switch DVI signal • HDMI1: Click to switch HDMI1 signal • HDMI2: Click to switch HDMI2 signal • HDMI3(4K): Click to switch HDMI3 signal • DP(4K): Click to switch DP signal <p>Input source status light:</p> <ul style="list-style-type: none"> – Steady on: The input source signal is normal – Flashing: No signal source is connected or the connected signal source is abnormal



*The product images in this article are for reference only. Please refer to the actual product purchased.

Video input interface		
Interface	QTY	Illustrate
DP 1.1	1	<ul style="list-style-type: none"> • Maximum support 3840*1080@60Hz or 3840*2160@30Hz • Support custom resolution: <ul style="list-style-type: none"> – Custom maximum width: 4096 (4096*2160@30Hz) – Custom maximum height: 4000 (2200*4000@30hz) • Support 8-bit video input • Supported color spaces/sampling rates: RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 • Supports HDCP 1.4 • Supports accompanying audio • Does not support interlaced signal input
HDMI1.4	1	<ul style="list-style-type: none"> • Maximum support 3840*1080@60Hz or 3840*2160@30Hz • Compatible with HDMI1.4 and HDMI1.3 video input • Support custom resolution: <ul style="list-style-type: none"> – Custom maximum width: 4096 (4096*2160@30Hz) – Custom maximum height: 4000 (2200*4000@30hz) • Support 8-bit video input • Supported color spaces/sampling rates: RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 • Supports HDCP 1.4 • Supports accompanying audio • Does not support interlaced signal input
HDMI 1.3	2	<ul style="list-style-type: none"> • Support maximum input resolution : 2048*1152 @60Hz • Support custom resolution : <ul style="list-style-type: none"> – Custom maximum width: 2048 (2048 × 1152 @ 60Hz) – Custom maximum height: 4000 (462 × 4000 @60Hz)

		<ul style="list-style-type: none"> • Supports 8-bit video input. • Supports HDCP 1.4. • Supported color spaces/sampling rates: RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2. • Supports accompanying audio input. • Interlaced signal input is not supported.
DVI	1	<ul style="list-style-type: none"> • Support maximum input resolution: 2048*1152@60Hz • Support custom resolution : <ul style="list-style-type: none"> – Custom maximum width: 2048 (2048×1 152 @60Hz) – Custom maximum height: 4000 (462×4000@60Hz) • Supports 8-bit video input. • Supports HDCP 1.4. • Supported color spaces/sampling rates: RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2. • Supports accompanying audio input. • Interlaced signal input is not supported.

Video Output Interface

Interface	QTY	Illustrate
Network port	12	<ul style="list-style-type: none"> • 12- channel Gigabit Ethernet output, capable of loading up to 7.8 million pixels. • Maximum width: 12270 , Maximum height: 4090 • The maximum load of a single network port is: When the output bit depth is 8 bits, 650,000 pixels

Audio Interface

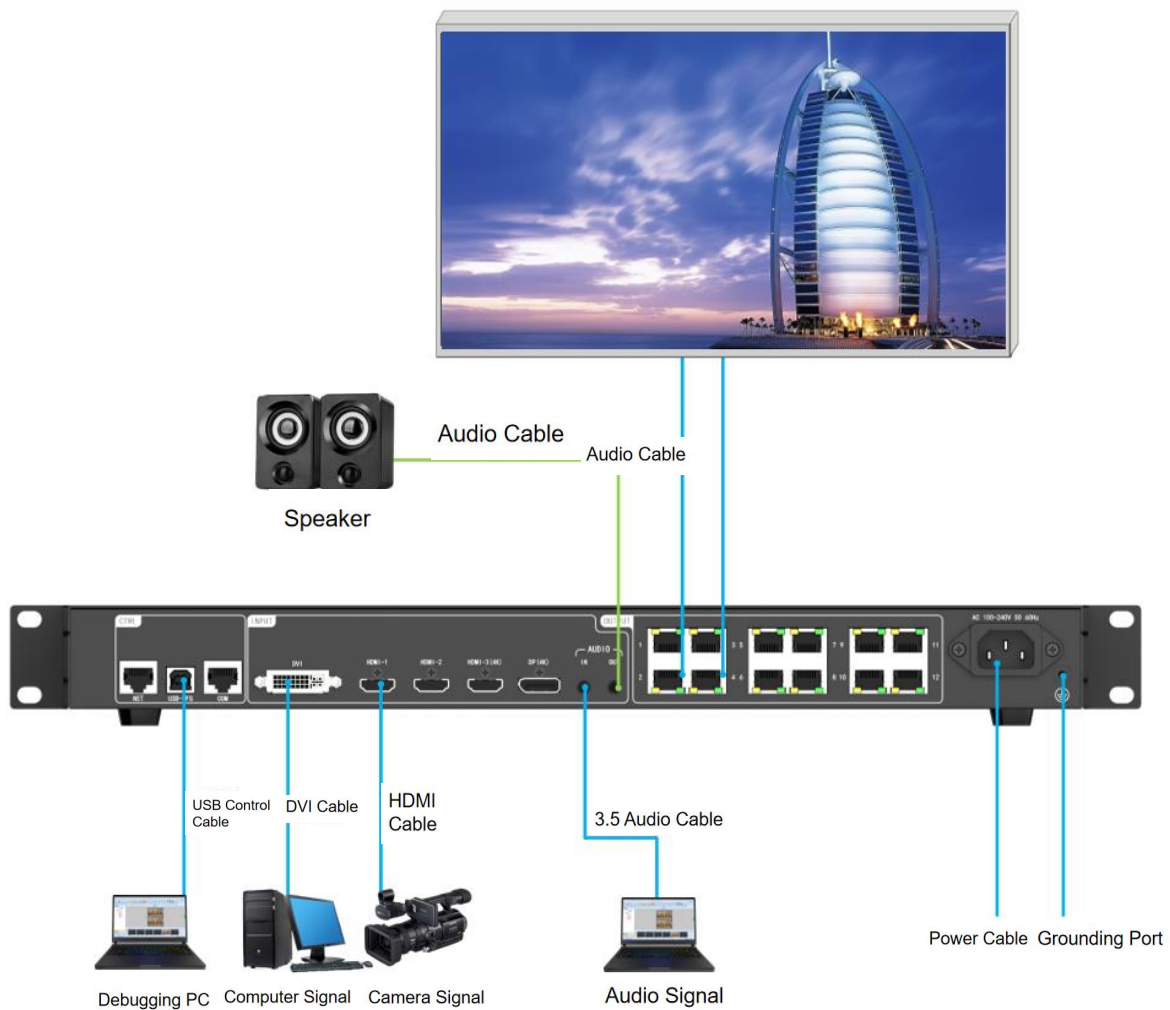
Interface	QTY	Illustrate
Audio	2	1 × audio input interface, 1 × audio output interface <ul style="list-style-type: none"> • 3.5mm standard audio input and output interface. • The audio sampling rate supports 48kHz.

Control Interface

Interface	QTY	Illustrate
COM	1	<ul style="list-style-type: none"> • RJ-45 interface, used to connect to the central control device

USB -CFG	1	<ul style="list-style-type: none"> • USB-CFG interface, used to connect to PC and control the device using host computer software
NET	1	<ul style="list-style-type: none"> • RJ45 interface, used to connect to the central control device • The device can be controlled by connecting to the host computer software via a network cable

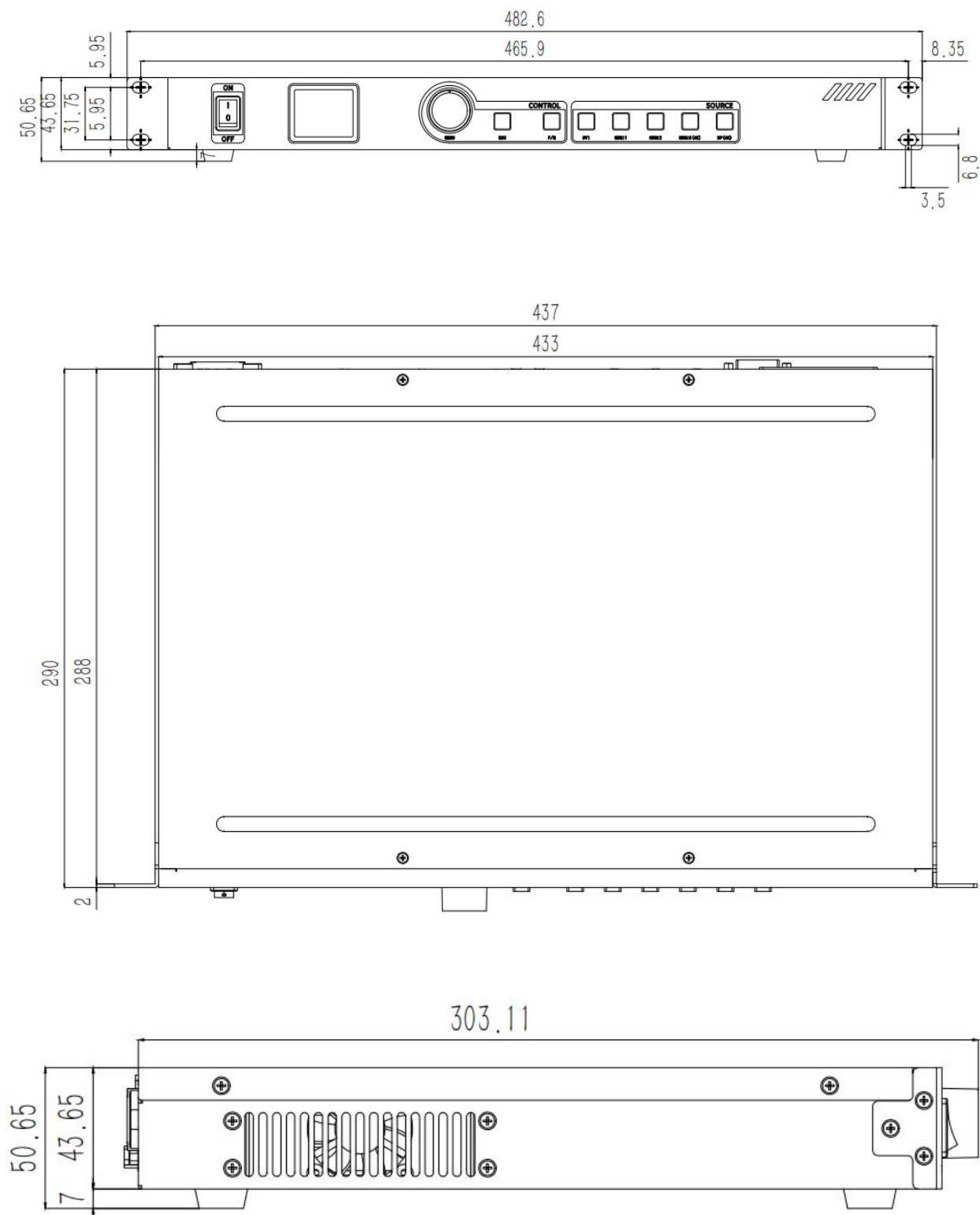
Application Scenario



Product Specifications

Machine Specifications		
Model		KLS12c
Electrical specifications	Power interface	100-240V~, 50/60Hz
	Maximum power consumption	102W
Work Environment	temperature	0°C ~ 50 °C
	humidity	0 %RH ~ 80 % RH, no condensation
Storage environment	temperature	-20 °C ~ +60 °C
	humidity	0 %RH ~ 95%RH, no condensation
Physical specifications	Product size	482.6mm × 2 90 mm × 50. 65 mm
Packaging Information	Accessories	1×power cable, 1×HDMI cable, 1×USB cable, 1×certificate of conformity, 1×warranty card, 1× instruction manual
	net weight	3.6 kg
	gross weight	4.5 kg
	Outer box size	550 mm × 90 mm × 385 mm

Product Size



Unit: mm Unmarked linear and angular dimension tolerances comply with GB/T1804-M

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