

Colorlight

U9 Max

Video Splicer

Specification V1.0



CONTENTS

1	Product Introduction	1
	1.1 Overview	1
	1.2 Appearance	2
2	Features	5
3	Applications	8
4	Board Specifications	9
	4.1 Input Boards	9
	4.2 Output Boards	23
	4.3 Preview Board	32
	4.4 Main Board	33
5	Input/Output Ports Specifications	34
	5.1 Input Ports	34
	5.2 Output Ports	42
6	Cabinet Count Loaded	46
7	Device Specifications	51
8	6 Principal Views	53
9	Reference Dimensions	54
10	Statements	55
	10.1 Certifications	55
	10.2 Legal Statement	55

01 PRODUCT INTRODUCTION

1.1 Overview

The U9 Max is Colorlight's next generation video splicer, featuring an integrated video processing and splicing solution. Powered by a robust FPGA architecture, the U9 Max offers a secure and stable software system, making it ideal for diverse applications. Whether for large-scale events, convention centers, stadiums, stage performances, traffic monitoring, or commercial exhibitions, the U9 Max delivers unparalleled reliability and performance.

In addition to an impressive load capacity of 260 million pixels, the U9 Max boasts a modular design that supports flexible combinations of 20 types of boards. It can accommodate 10 to 18 input boards and 10 to 2 output boards, with a total of 20 slots available. Input ports include HDMI, DisplayPort (DP), SDI, DVI, IP, VGA, and CVBS, while output options feature Gigabit Ethernet (GbE), 5G Ethernet, 10G fiber, HDMI, and DVI.

Excelling in multiple screen management, the U9 Max delivers 4K HDR ultra high-quality video with 10-bit video input and processing. It supports video source cropping, scaling, and the addition of various display elements like background images, subtitles, and logos. The unit also supports multiple redundancy options, including fiber ports, Ethernet ports, and power supplies, ensuring high availability. Additional features include dual 4K UHD video preview and monitoring, system health monitoring, and email alert functionality. This versatility makes the U9 Max well-suited for small-pitch LED video walls, LCD video walls, and projection screens.

Compatible with multiple operating systems such as Windows, macOS, and Linux, the Universe series supports cross-platform control and management via a web browser. The series offers practical features such as real-time multi-user collaboration and modular permission management. Combined with an intuitive user interface, it offers a smooth human-machine interaction experience.

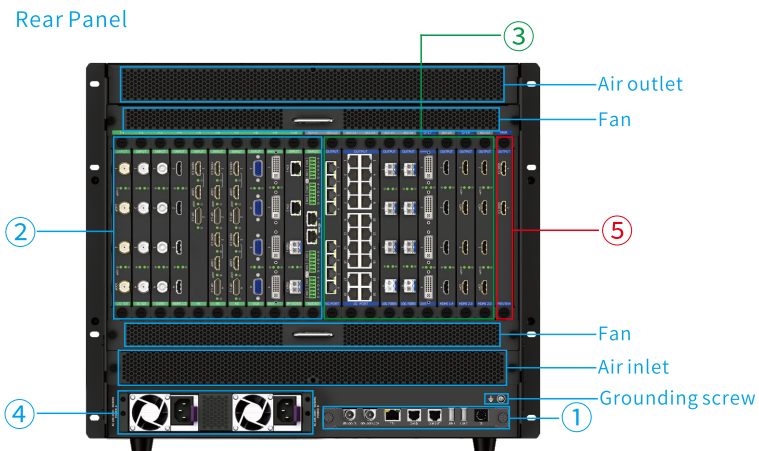
1.2 Appearance

Front Panel



No.	Name	Description
1	Touch screen	Displays device status and allows for parameters configuration and device operation.
2	Power switch	Power on/off the device.

1.2 Appearance



No.	Name	Description
1	Main board	GENLOCK IN port, GENLOCK LOOP port, RS232 serial port, USB 2.0 port, GbE port, 3D port.
2	Input board	Supports 12 types of input boards.
3	Output board	Supports 8 types of output boards.
4	Power supply	AC 100-240V, 50/60Hz, supports dual power supplies (a redundant power supply is optional).
5	Preview board	2×HDMI 2.0 ports: Connect to a monitor for preview and monitoring of inputs and outputs. 2×RJ45 GbE ports: Connect to the network for monitoring the inputs and outputs.



Notes on slot silkscreen markings:

- Slots marked "I-x" are for input boards, where "I" indicates input and "x" stands for the slot number. For example, "I-1" indicates that the first input slot can only be used for an input board.
- Slots marked "O-x" are for output boards, where "O" indicates output and "x" stands for the slot number. For example, "O-17" indicates that the 17th output slot can only be used for an output board.
- Slots marked "I/O-x" can be used for either input or output boards.
- Slot marked "MVR" is for the preview board only.

02 FEATURES

Modular Design Flexible Combination

- 3 LED screen solutions:
 - 10G fiber output: Loads up to 26 million pixels per board and 260 million pixels per device.
 - 5G Ethernet output: Loads up to 23.6 million pixels per board and 236 million pixels per device.
 - 1G Ethernet output: Loads up to 13 million pixels per board and 65 million pixels per device.
- Projection screen or LCD screen solutions:
 - HDMI 2.0 video output: Loads up to $2 \times 4K \times 2K@60Hz$ per board.
 - HDMI 1.4 video output: Loads up to $4 \times 4K \times 1K@60Hz$ per board.
 - HDMI 1.3 video output: Loads up to $6 \times 2K \times 1K@60Hz$ per board.
 - DVI video output: Loads up to $4 \times 2K \times 1K@60Hz$ per board.
- Supports all the above display solutions simultaneously.
- Supports 20 types of hot-swappable I/O boards. Input slots accommodate 10 to 18 boards, and output slots accommodate 10 to 2 boards:
 - Input ports: HDMI 2.0, DP 1.2, 12G-SDI, IP, HDMI 1.3, DVI, VGA, CVBS, 3G-SDI.
 - Output ports: HDMI 2.0, HDMI 1.4, DVI, 10G fiber, 5G Ethernet, 1G Ethernet.
- Supports real-time monitoring of the status of all boards.
- Supports input and output frame rates from 23.98 Hz to 240 Hz.

Multiple Screen Management

- Screen group management: Up to 10 groups of LED/LCD screens.
- Custom resolutions per screen group.
- User-definable parameters per screen: Layers, colors, presets, frame rates, and more.
- Synchronized splicing between screens, with no tearing, delay, or frame loss.
- Advanced seam correction for LED screens.
- Bezel compensation for LCD screens.

4K HDR Impeccable Visuals

- True 4K: 4096×2160@60Hz.
- HDR:
 - Supports HDR 10, compliant with SMPTE ST 2086/2084.
 - Supports HLG.
- 8-bit and 10-bit color depth.
- Maximum frame rate: 240Hz.

Powerful Video Processing

- Multi-layer display:
 - 160×2K or 40×4K layers per device.
 - 16×2K or 4×4K layers per board.
- Inputs scaling and cropping.
- Layer roaming and free splicing.
- Automatic and manual frame rate multiplication.
- Fade in/out.
- 3D display.
- Precise color management.
- Multiple color formats:
 - RGB, YCbCr444, YCbCr422, YCbCr420.
- Supports color management by input sources, output ports, and screens.
 - Color management adjusts brightness, color temperature, saturation, hue, contrast, brightness compensation, and RGB.

Diversified Display

- BKG: UHD images supported, not counting as a layer, with a maximum height and width of 32768 pixels.
- OSD (image and text):
 - Scrolling images and text.
 - Adjustable OSD transparency for superimposing.
 - Custom direction, speed, and style.

- Signal logo: Supports adding an image or text logo for identifying the input source.
- Advanced test patterns: Includes up to 15 built-in test patterns that can display any color.

All-Round Preview and Monitoring

- 2×HDMI 2.0 ports: Supports simultaneous 4K ultra HD preview and monitoring.
- Software-based preview: Supports device control as well as preview and monitoring using one cable.
- HD LCD screen on front panel: On-device input preview and output monitoring, no external devices required.

Web Control All-in-One Web Control

- Cross-platform web control, real-time multi-user collaboration.
- Screen/device management, input configuration, and splicing settings.
- Screen mapping, screen parameter transmission, and advanced seam correction.
- App control via Kylin visualization intelligent control platform.
- Intuitive human-machine interface with operational guide.
- Up to 20,000 presets: Available for real-time loading and scheduled playback.

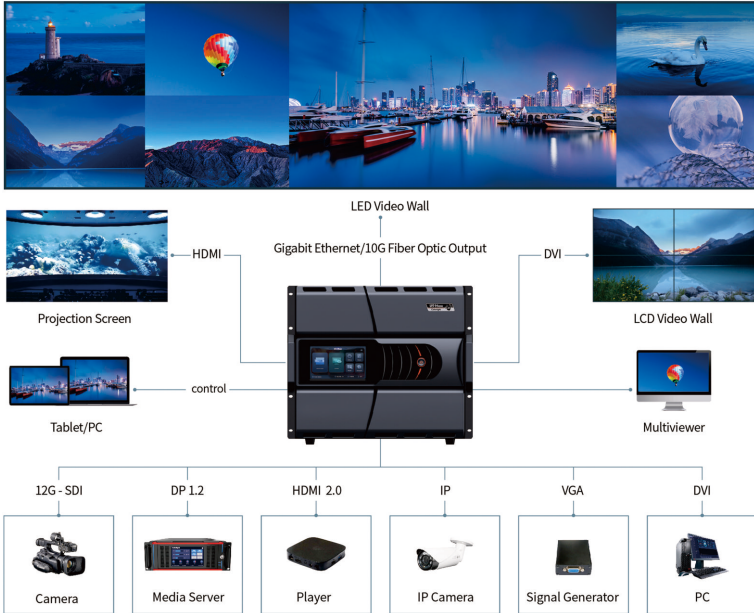
Secure and Stable


- Dual power supplies ensure 24/7 uptime.
- Parameter snapshot, as well as multiple redundancies for Ethernet, fiber, and devices
- Permission management and log record.

Real-time monitoring and anomaly alerts:

- Monitors device status, power status, and fan speed.
- Monitors screen connection status, runtime, temperature and humidity, and error rates.

03 APPLICATIONS



 Note: The image displayed is for illustrative purposes and may vary from the actual product.

04 BOARD SPECIFICATIONS

4.1 Input Boards

12 types of input boards available for flexible configuration:

Name	Model
U_2×HDMI 2.0+2×DP 1.2 input board	U_IN_2HDMI20_2DP12
U_1×HDMI 2.0+1×DP 1.2 input board	U_IN_1HDMI20_1DP12
U_2×12G-SDI input board	U_IN_2×12GSDI
U_1×12G-SDI input board	U_IN_1×12GSDI
U_4×3G-SDI input board	U_IN_4×3GSDI
U_4×HDMI 1.3 input board	U_IN_4HDMI13
U_6×HDMI 1.3 input board	U_IN_6HDMI13
U_4×VGA input board	U_IN_4VGA
U_2×VGA+2×CVBS input board	U_IN_2VGA_2CVBS
U_4×AUDIO input board	U_IN_4AUDIO
U_4×DVI input board	U_IN_4DVI
U_4×CVBS input board	U_IN_4CVBS

Number of input boards per device:

- Maximum number of boards: 18

Name: U_2×HDMI 2.0+2×DP 1.2 Input Board

Model: U_IN_2HDMI20_2DP12



Two groups of 4K input ports: Each group includes 1×HDMI 2.0 & LOOP ports, and 1×DP 1.2 port. For each group, both HDMI 2.0 and DP 1.2 can be connected simultaneously, but only one can be displayed.

2×HDMI2.0

- Backwards compatible with HDMI 1.4/1.3.
- Each port supports a maximum pixel clock of 600MHz; video inputs up to 4096 × 2160@60Hz/8192 × 1080@60Hz.
- Supports custom resolutions through EDID configuration:
 - Maximum width: 4096 pixels (when the width is 4096 pixels, supported resolutions include 4096 × 2160@60Hz, 4096 × 2160@50Hz, and 4096 × 2160@30Hz.).
 - Maximum height: 4095 pixels (2160 × 4095@60Hz).
- Width/height limit: 8192 pixels (forced by external signal).
- 8/10-bit input.
- Color formats: RGB, YCbCr444, YCbCr422, YCbCr420.
- Frame rates: 23.98Hz ~ 240Hz.
- Supports HDR10 and HLG.
- Supports HDCP2.2 and HDCP1.4.
- Supports embedded audio input.
- Progressive only.

2×HDMI2.0_LOOP

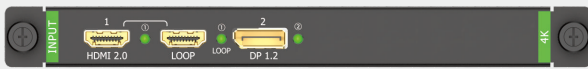
- 2×HDMI 2.0 loop-out ports.

2×DP1.2

- Backwards compatible with DP 1.1.
- Each port supports a maximum pixel clock of 600MHz; video inputs up to 4096 × 2160@60Hz/8192 × 1080@60Hz.
- Supports custom resolutions through EDID/DisplayID configuration:
 - Maximum weight: 8192 pixels (8192 × 1080@60Hz).


Details

<p>Details</p>	<ul style="list-style-type: none"> - Maximum height: 8192 pixels (1024×8192@60Hz). ● Width/height limit: 8192 pixels. ● 8/10-bit input. ● Color formats: RGB, YCbCr444, YCbCr422. ● Frame rates: 23.98Hz ~ 240Hz. ● Supports HDR10 and HLG. ● Supports HDCP2.2 and HDCP1.4. ● Supports embedded audio input. ● Progressive only. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 500 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 26W
<p>Tech Specs</p>	<ul style="list-style-type: none"> ● For video specifications, refer to Sections 5.1.1 and 5.1.2.


<p>Name: U_1×HDMI 2.0+1×DP 1.2 Input Board Model: U_IN_1HDMI20_1DP12</p>	
<p>Details</p>	 <p>1×HDMI2.0</p> <ul style="list-style-type: none"> ● Backwards compatible with HDMI 1.4/1.3.

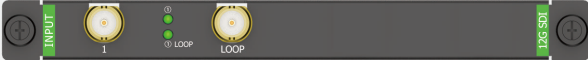
Details	<ul style="list-style-type: none"> ● Each port supports a maximum pixel clock of 600MHz; video inputs up to 4096 × 2160@60Hz/8192 × 1080@60Hz. ● Supports custom resolutions through EDID configuration: <ul style="list-style-type: none"> - Maximum width: 4096 pixels (4096 × 2160@60Hz). - Maximum height: 4095 pixels (2160 × 4095@60Hz). ● Width/height limit: 8192 pixels (forced by external signal). ● 8/10-bit input. ● Frame rates: 23.98Hz ~ 240Hz. ● Supports HDR10 and HLG. ● Color formats: RGB, YCbCr444, YCbCr422, YCbCr420. ● Supports HDCP2.2 and HDCP1.4. ● Supports embedded audio input. ● Progressive only. <p>1 × HDMI2.0_LOOP</p> <ul style="list-style-type: none"> ● 1 × HDMI 2.0 loop-out port. <p>1 × DP1.2</p> <ul style="list-style-type: none"> ● Backwards compatible with DP 1.1. ● Each port supports a maximum pixel clock of 600MHz; video inputs up to 4096 × 2160@60Hz/8192 × 1080@60Hz. ● Supports custom resolutions through EDID/DisplayID configuration: <ul style="list-style-type: none"> - Maximum weight: 8192 pixels (8192 × 1080@60Hz). - Maximum height: 8192 pixels (1024 × 8192@60Hz). ● Width/height limit: 8192 pixels. ● 8/10-bit input. ● Frame rates: 23.98Hz ~ 240Hz. ● Supports HDR10 and HLG. ● Color formats: RGB, YCbCr444, YCbCr422. ● Supports HDCP2.2 and HDCP1.4. ● Supports embedded audio input. ● Progressive only.
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Details	<p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 500 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 20W
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Sections 5.1.1 and 5.1.2.


<p>Name: U_4 × DVI Input Board Model: U_IN_4DVI</p>	
Details	 <p>4 × DVI</p> <ul style="list-style-type: none"> ● Supports both SL-DVI and DL-DVI. ● SL-DVI: <ul style="list-style-type: none"> ○ Ports 1 and 3 can be used as SL-DVI inputs. ○ Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048 × 1080@60Hz/4096 × 512@60Hz. ○ Supports custom resolutions through EDID configuration: <ul style="list-style-type: none"> - Maximum width: 4095 pixels (4095 × 512@60Hz). - Maximum height: 4095 pixels (512 × 4095@60Hz). ○ Width/height limit: 4096 pixels (forced by external signal). ● DL-DVI: <ul style="list-style-type: none"> ○ Ports 2 and 4 can be used as DL-DVI inputs.


Details	<ul style="list-style-type: none"> ◦ Each port supports a maximum pixel clock of 330MHz; video inputs up to 4096 × 1080@60Hz/4096 × 2160@30Hz. ◦ Supports custom resolutions through EDID configuration: <ul style="list-style-type: none"> - Maximum weight: 4095 pixels (4095 × 1080@60Hz). - Maximum height: 4095 pixels (1080 × 4095@60Hz). ◦ Width/height limit: 4096 pixels (forced by external signal). ● 8-bit input. ● Frame rates: 23.98Hz ~ 120Hz. ● Color formats: RGB, YCbCr444, YCbCr422. ● Supports HDCP1.4. ● Progressive only. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 415 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 9W
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Sections 5.1.3 and 5.1.4.

Name: U_2×12G-SDI Input Board		Model: U_IN_2×12GSDI
Details	 <p>2 × 12G-SDI</p> <ul style="list-style-type: none"> ● Backwards compatible with 6G-SDI, 3G-SDI (Level A/B), HD-SDI, and SD-SDI. ● Supports SMPTE ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards. ● Each port supports a maximum video input of 4096×2160@60Hz. ● 10-bit input. ● Frame rates: 23.98Hz ~ 60Hz. ● Color format: YCbCr422. ● Supports signal de-interlacing: 480i/576i/1080i. <p>2 × 12G-SDI_LOOP</p> <ul style="list-style-type: none"> ● 2 × 12G-SDI loop-out ports. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 455 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 11W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.1.5. 	

Name: U_1×12G-SDI Input Board		Model: U_IN_1×12GSDI
Details	 <p>1 × 12G-SDI</p> <ul style="list-style-type: none"> ● Backwards compatible with 6G-SDI, 3G-SDI (Level A/B), HD-SDI, and SD-SDI. ● Supports SMPTE ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards. ● Each port supports a maximum video input of 4096×2160@60Hz. ● 10-bit input. ● Frame rates: 23.98Hz ~ 60Hz. ● Color format: YCbCr422. ● Supports signal de-interlacing: 480i/576i/1080i. <p>1 × 12G-SDI_LOOP</p> <ul style="list-style-type: none"> ● 1 × 12G-SDI loop-out port. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 455 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 10W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.1.5. 	

Name: U_4×3G-SDI Input Board		Model: U_IN_4×3GSDI
Details	 <p>4×3G-SDI</p> <ul style="list-style-type: none"> ● Backwards compatible with HD-SDI and SD-SDI. ● Supports SMPTE ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards. ● Each port supports a maximum video input of 2048×1080@60Hz. ● Supported formats: Level A and Level B. ● 10-bit input. ● Frame rates: 23.98Hz ~ 60Hz. ● Color format: YCbCr422. ● Supports signal de-interlacing: 480i/576i/1080i. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 470 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 9W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.1.6. 	

Name: U_4×HDMI 1.3 Input Board		Model: U_IN_4HDMI13
Details	 <p>4×HDMI1.3</p> <ul style="list-style-type: none"> ● Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048 × 1080@60Hz. ● Supports custom resolutions through EDID configuration: <ul style="list-style-type: none"> ○ Maximum width: 4095 pixels (4095×512@60Hz). ○ Maximum height: 4095 pixels (512×4095@60Hz). ● Width/height limit: 4096 pixels (forced by external signal). ● 8-bit input. ● Frame rates: 23.98Hz ~ 120Hz. ● Color formats: RGB, YCbCr444, YCbCr422. ● Supports HDCP1.4. ● Supports embedded audio input. ● Progressive only. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 395 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 9W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.1.7. 	

Name: U_6×HDMI 1.3 Input Board		Model: U_IN_6HDMI13
Details	 <p>6×HDMI1.3</p> <ul style="list-style-type: none"> ● Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048 × 1080@60Hz. ● Supports custom resolutions through EDID configuration: <ul style="list-style-type: none"> ○ Maximum width: 4095 pixels (4095×512@60Hz). ○ Maximum height: 4095 pixels (512×4095@60Hz). ● Width/height limit: 4096 pixels (forced by external signal). ● 8-bit input. ● Frame rates: 23.98Hz ~ 120Hz. ● Color formats: RGB, YCbCr444, YCbCr422. ● Supports HDCP1.4. ● Supports embedded audio input. ● Progressive only. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 415 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 11W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.1.7. 	

Name: U_4×AUDIO Input Board

Model: U_IN_4AUDIO



8×Phoenix connectors

- 8 audio channels, each supporting both input and output.
- Supports single channel and dual channel modes.
 - Single channel mode
 - 4 audio inputs and 4 audio outputs.
 - Dual channel mode
 - 2 audio inputs and 2 audio outputs.
- Audio sampling rate: 48kHz.
- Sources of output audio
 - Embedded audio from the input video.
 - Audio input from the audio board.
- Supports switching between single channel and dual channel modes.
- Supports output volume adjustment and one-click mute.
- Supports audio output delay.

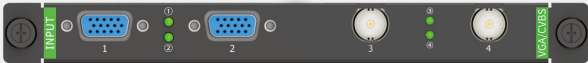
Details

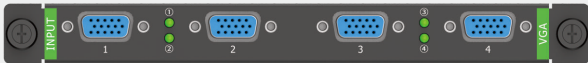
2×Dante

- Each Dante port supports 8 channels of audio inputs and 8 channels of audio outputs.
- Audio sampling rate: 16kHz ~ 192kHz.
- Sources of output audio
 - Embedded audio from the input video.
 - Audio input from the audio board.
- Supports switching between single channel and dual channel modes.
- Supports output volume adjustment and one-click mute.
- Supports audio output delay.


Specifications

- Weight: 480 g
- Dimensions: 193 mm×243.2 mm×19.82 mm
- Power consumption: 10W

Name: U_2×VGA+2×CVBS Input Board		Model: U_IN_2VGA_2CVBS
Details	 <p>2×VGA</p> <ul style="list-style-type: none"> Each port supports a maximum video input of 1920×1200@60Hz. <p>2×CVBS</p> <ul style="list-style-type: none"> Supports both PAL and NTSC standards. <p>Status LEDs</p> <ul style="list-style-type: none"> Off: Power supply failure. Solid green: Normal power supply. Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> Weight: 420 g Dimensions: 193 mm×243.2 mm×19.82 mm Power consumption: 10W 	
Tech Specs	<ul style="list-style-type: none"> For video specifications, refer to Section 5.1.8. 	

Name: U_4×VGA Input Board		Model: U_IN_4VGA
Details	 <p>4×VGA</p> <ul style="list-style-type: none"> Each port supports a maximum video input of 1920×1200@60Hz. <p>Status LEDs</p> <ul style="list-style-type: none"> Off: Power supply failure. Solid green: Normal power supply. Blinking green: Normal video source input. 	

Details	<p>Specifications</p> <ul style="list-style-type: none"> • Weight: 420 g • Dimensions: 193 mm × 243.2 mm × 19.82 mm • Power consumption: 10W
Tech Specs	<ul style="list-style-type: none"> • For video specifications, refer to Section 5.1.8.

<p>Name: U_4 × CVBS Input Board Model: U_IN_4CVBS</p>	
Details	 <p>4 × CVBS</p> <ul style="list-style-type: none"> • Supports both PAL and NTSC standards. <p>Status LEDs</p> <ul style="list-style-type: none"> • Off: Power supply failure. • Solid green: Normal power supply. • Blinking green: Normal video source input. <p>Specifications</p> <ul style="list-style-type: none"> • Weight: 420 g • Dimensions: 193 mm × 243.2 mm × 19.82 mm • Power consumption: 10W
Tech Specs	<ul style="list-style-type: none"> • For video specifications, refer to Section 5.1.8.

4.2 Output Boards

8 types of output boards available for flexible configuration:

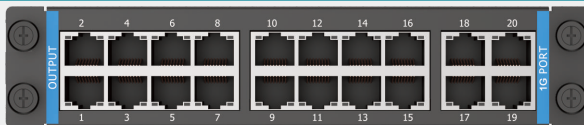
Name	Model
U_20×1G Ethernet output board	U_OUT_20×1G_RJ45
U_8×5G Ethernet output board	U_OUT_8×5G_RJ45
U_4×10G fiber output board	U_OUT_4×10G_FIBER
U_2×HDMI 2.0 output board	U_OUT_2HDMI20
U_1×HDMI 2.0 output board	U_OUT_1HDMI20
U_4×HDMI 1.4 output board	U_OUT_4HDMI14
U_6×HDMI 1.3 output board	U_OUT_6HDMI13
U_4×DVI output board	U_OUT_4DVI

Number of output boards per device:

Max. output boards	10	
Output Boards	Max. Output Ports	Max. Load Capacity
U_20×1G Ethernet output board	100	65 million pixels
U_8×5G Ethernet output board	80	236 million pixels
U_4×10G fiber output board	40	260 million pixels
U_2×HDMI 2.0 output board	20	81920×2160@60Hz
U_1×HDMI 2.0 output board	10	40960×2160@60Hz
U_4×HDMI 1.4 output board	40	81920×2160@60Hz
U_6×HDMI 1.3 output board	60	57600×2160@60Hz
U_4×DVI output board	40	38400×2160@60Hz

Name: U_20×1G Ethernet Output Board

Model: U_OUT_20×1G_RJ45



As an LED sending card, this board loads up to 13 million pixels, with a maximum width and height of 16384 pixels. Each board occupies two slots.

20×RJ45 1G Ethernet ports

- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Supports loop redundancy between Ethernet ports.

Status LEDs

- Off: Power supply failure.
- Solid green: Normal power supply.
- Blinking orange: Normal data communication.

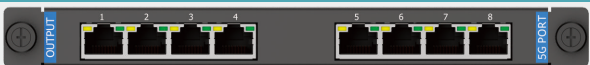
Specifications

- Weight: 596 g
- Dimensions: 193 mm×243.2 mm×19.82 mm
- Power consumption: 40W

Details

	Frame Rate (Hz)	Color Depth (bit)	Pixels
Load Capacity per Board	60	8	13 million
		10	9.75 million
	120	8	6.5 million
		10	4.87 million
	240	8	3.25 million
		10	2.43 million

Name: U_8×5G Ethernet Output Board
Model: U_OUT_8×5G_RJ45



As an LED sending card, this board loads up to 23.6 million pixels, with a maximum width and height of 16384 pixels. Cat6a shielded cable is required.

8 × RJ45 5G Ethernet ports

- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Supports loop redundancy between Ethernet ports.

Status LEDs

- Off: Power supply failure.
- Solid green: Normal power supply; normal cable connection.
- Blinking orange: Normal data communication.

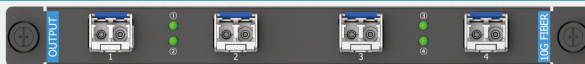
Specifications

- Weight: 510 g
- Dimensions: 193 mm × 243.2 mm × 19.82 mm
- Power consumption: 28W

	Frame Rate (Hz)	Color Depth (bit)	Pixels
Load Capacity per Board	60	8	23.6 million
		10	17.7 million
	120	8	11.8 million
		10	8.85 million
	240	8	5.9 million
		10	4.42 million

Name: U_4×10G fiber Output Board

Model: U_OUT_4×10G_FIBER



As an LED sending card, this board loads up to 26 million pixels, with a maximum width and height of 16384 pixels. A dedicated fiber optic transceiver is required.

4×10G fiber

- Supports 3 operating modes: independent, redundancy, and copy.
- Independent mode
 - All 4 fiber ports are used for output. Each port can be converted to 10×1G Ethernet ports via fiber optic transceivers.
- Redundancy mode
 - Ports 1 and 2 are used as the primary ports, while Ports 3 and 4 are used as the backup ports. Port 3 backs up the output of Port 1, and Port 4 backs up the output of Port 2.
 - To enable redundancy mode, the primary and backup ports must be connected in a loop.
- Copy mode
 - Ports 1 and 2 are used for the primary ports, while Ports 3 and 4 are used as the copy ports. Port 3 copies the output of Port 1, and Port 4 copies the output of Port 2.
- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Supports both single-mode and multi-mode optical modules, with single-mode transmitting up to 20 km and multi-mode up to 300 m.
- Optical modules must support SFP+ encapsulation.
- Comes with 4 single-mode, dual-core optical modules, with a transmission distance of 2 km and a wavelength of 1310 nm. Other specifications of optical modules are optional.


Status LEDs

- Off: Power supply failure.

Details

Details	<ul style="list-style-type: none"> ● Solid green: Normal power supply. ● Blinking green: Normal fiber connection. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 490 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 23W 		
	Load Capacity per Board	60	8
10			19.64 million
120		8	13.08 million
		10	9.8 million
240		8	6.52 million
		10	4.88 million

Name: U_2 × HDMI 2.0 Output Board Model: U_OUT_2HDMI20



2 × HDMI 2.0

- Ports 1 and 2 are used for video output. Port 1 (COPY) copies the output of Port 1, and Port 2 (COPY) copies the output of Port 2.
- Each port supports a maximum video output of 4096 × 2160@60Hz/ 8192 × 1080@60Hz.
- Width/height limit: 8192 pixels.
- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Color formats: RGB, YCbCr444, YCbCr422.

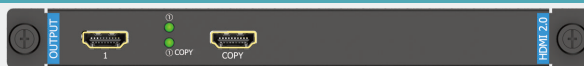
Status LEDs

- Off: Power supply failure.

Details	<ul style="list-style-type: none"> ● Solid green: Normal power supply. ● Blinking green: Normal video source output. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 486 g ● Dimensions: 193 mm × 243.2 mm × 19.82 mm ● Power consumption: 25W
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.2.1.

Name: U_1×HDMI 2.0 Output Board

Model: U_OUT_1HDMI20

**1×HDMI2.0**

- Port 1 is used for video output. Port 1 (COPY) copies the output of Port 1.
- Each port supports a maximum video output of 4096×2160@60Hz/ 8192×1080@60Hz.
- Width/height limit: 8192 pixels.
- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Color formats: RGB, YCbCr444, YCbCr422.

Status LEDs


- Off: Power supply failure.
- Solid green: Normal power supply.
- Blinking green: Normal video source output.


Specifications


- Weight: 486 g

Details	<ul style="list-style-type: none"> • Dimensions: 193 mm × 243.2 mm × 19.82 mm • Power consumption: 25W
Tech Specs	<ul style="list-style-type: none"> • For video specifications, refer to Section 5.2.1.

Name: U_4 × DVI Output Board Model: U_OUT_4DVI

	
Details	<p>4 × DVI</p> <ul style="list-style-type: none"> • Each port supports a maximum video output of 2048 × 1080@60Hz. • Width/height limit: 4096 pixels. • 8-bit output. • Frame rates: 23.98Hz ~ 60Hz. • Color formats: RGB, YCbCr444, YCbCr422. <p>Status LEDs</p> <ul style="list-style-type: none"> • Off: Power supply failure. • Solid green: Normal power supply. • Blinking green: Normal video source output. <p>Specifications</p> <ul style="list-style-type: none"> • Weight: 506 g • Dimensions: 193 mm × 243.2 mm × 19.82 mm • Power consumption: 25W
Tech Specs	<ul style="list-style-type: none"> • For video specifications, refer to Section 5.2.4.

Name: U_4×HDMI 1.4 Output Board		Model: U_OUT_4HDMI14
Details		
	<p>4×HDMI1.4</p> <ul style="list-style-type: none"> ● Each port supports a maximum video output of 4096×2160@30Hz/ 4096×1080@60Hz. ● Width/height limit: 4096 pixels. ● 8-bit output. ● Frame rates: 23.98Hz ~ 120Hz. ● Color formats: RGB, YCbCr444, YCbCr422. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source output. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 476 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 25W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.2.2. 	

Name: U_6×HDMI 1.3 Output Board		Model: U_OUT_6HDMI13
Details	 <p>6×HDMI 1.3</p> <ul style="list-style-type: none"> ● Each port supports a maximum video output of 2048×1080@60Hz. ● Width/height limit: 4096 pixels. ● 8-bit output. ● Frame rates: 23.98Hz ~ 120Hz. ● Color formats: RGB, YCbCr444, YCbCr422. <p>Status LEDs</p> <ul style="list-style-type: none"> ● Off: Power supply failure. ● Solid green: Normal power supply. ● Blinking green: Normal video source output. <p>Specifications</p> <ul style="list-style-type: none"> ● Weight: 476 g ● Dimensions: 193 mm×243.2 mm×19.82 mm ● Power consumption: 25W 	
Tech Specs	<ul style="list-style-type: none"> ● For video specifications, refer to Section 5.2.3. 	

4.3 Preview Board

Name: U_Preview Board

Model: U_OUT_2HDMI20_2RJ45



2 × HDMI2.0

- Connects to a monitor for preview and monitoring of inputs and outputs.
- Supports 3840×2160@60Hz and 1920×1080@60Hz.
- By default, Port 1 is for preview, and Port 2 is for monitoring.
- The layout of the preview and monitoring images can be customized, with multiple built-in templates available.

Details

2 × RJ45 1G Ethernet ports (reserved)

- Connects to the network to monitor real-time inputs and outputs by entering the URL.

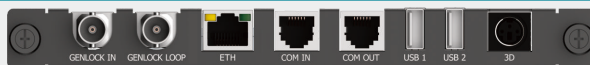
Specifications

- Weight: 500 g
- Dimensions: 193 mm × 243.2 mm × 19.82 mm
- Power consumption: 25W

4.4 Main Board

Name: U_Main Board

Model: U_MAINBOARD



1 × GENLOCK_IN/LOOP

- 1 × GENLOCK IN, for reference input; 1 × GENLOCK LOOP, for reference loop.
- Supports Black burst, Bi-level, and Tri-level.

1 × RJ45 1G Ethernet port

- Communication port for the control device.
- Connects to a PC, tablet, or other devices via a switch or router for device setup and control.

2 × RJ11

- RS232 serial ports (baud rate: 115200), for connecting to central controllers or other devices.

2 × USB2.0

- For upgrading firmware using a USB flash drive.
- For restoring or exporting device data using a USB flash drive.

Specifications

- Weight: 479 g
- Dimensions: 193 mm × 243.2 mm × 19.82 mm
- Power consumption: 8W


Details

05 INPUT/OUTPUT PORTS SPECIFICATIONS

5.1 Input Ports


5.1.1 HDMI2.0

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50
	YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60
UHD 3840×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50
	YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60
QHD 2560×1440	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100
	YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
2K 2048×1152	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
FHD 1920×1080	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240
HD 1280×720	RGB/YCbCr444/ YCbCr422/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.


5.1.2 DP1.2

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
UHD 3840×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
QHD 2560×1440	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
	YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240
HD 1280×720	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.


5.1.3 DL-DVI

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30
UHD 3840×2160	RGB/YCbCr444	8	23.98,24,25,29.97,30
QHD 2560×1440	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

5.1.4 SL-DVI

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

5.1.5 12G-SDI


Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
12G-SDI 4096×2160 3840×2160	YCbCr422	8/10	50,59.94,60
6G-SDI 4096×2160 3840×2160	YCbCr422	8/10	23.98,24,25,29.97,30
3G-SDI 2048×1080 1920×1080	YCbCr422	8/10	50,59.94,60
HD-SDI 1920×1080i	YCbCr422	8/10	50,59.94,60
HD-SDI 2048×1080 1920×1080	YCbCr422	8/10	23.98,24,25,29.97,30
HD-SDI 1280×720	YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60
ED-SDI 720×576 720×480	YCbCr422	8/10	50,59.94
SD-SDI 720×576i 720×480i	YCbCr422	8/10	50,59.94

5.1.6 3G-SDI

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
3G-SDI 2048×1080 1920×1080	YCbCr422	8/10	50,59.94,60
HD-SDI 1920×1080i	YCbCr422	8/10	50,59.94,60
HD-SDI 2048×1080 1920×1080	YCbCr422	8/10	23.98,24,25,29.97,30
HD-SDI 1280×720	YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60
ED-SDI 720×576 720×480	YCbCr422	8/10	50,59.94
SD-SDI 720×576i 720×480i	YCbCr422	8/10	50,59.94


5.1.7 HDMI1.3

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

5.1.8 VGA


Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
WUXGA 1920×1200	RGB	8	23.98,24,25,29.97,30,50,59.94,60
FHD 1920×1080	RGB	8	23.98,24,25,29.97,30,50,59.94,60
UXGA 1600×1200	RGB	8	23.98,24,25,29.97,30,50,59.94,60
SXGA 1280×1024	RGB	8	23.98,24,25,29.97,30,50,59.94,60
HD 1280×720	RGB	8	23.98,24,25,29.97,30,50,59.94,60
XGA 1024×768	RGB	8	23.98,24,25,29.97,30,50,59.94,60
SVGA 800×600	RGB	8	23.98,24,25,29.97,30,50,59.94,60

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

5.2 Output Ports


5.2.1 HDMI2.0

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30
	YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60
UHD 3840×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30
	YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60
QHD 2560×1440	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100
	YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240
HD 1280×720	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144,200,240

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.


5.2.2 HDMI1.4

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30
UHD 3840×2160	RGB/YCbCr444	8	23.98,24,25,29.97,30
QHD 2560×1440	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.


5.2.3 HDMI1.3

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

5.2.4 DVI

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
2K 2048×1152	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
WUXGA 1920×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
FHD 1920×1080	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
UXGA 1600×1200	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60
SXGA 1280×1024	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100
HD 1280×720	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
XGA 1024×768	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
SVGA 800×600	RGB/YCbCr444/ YCbCr422	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120

 Note: The above is for standard resolutions. Non-standard resolutions should be used within the interface bandwidth limit.

06 CABINET COUNT LOADED

Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
1G Ethernet port (8-bit)	60Hz	768*432	1	1×1
		640*360	2	2×1, 1×2
		480*270	5	5×1, 2×2, 1×5
		384*216	7	7×1, 3×2, 2×3, 1×7
		320*180	11	10×1, 5×2, 3×3, 2×5, 1×10
		256*512	5	5×1, 2×2, 1×5
		256*256	10	10×1, 5×2, 3×3, 2×4, 1×9
		168*168	23	23×1, 11×2, 7×3, 5×4, 4×5, 3×7, 2×11, 1×21
	128*128	40	40×1, 20×2, 13×3, 10×4, 7×5, 6×6, 5×7, 4×9, 3×13, 2×19, 1×35	
	120Hz	640*360	1	1×1
		480*270	2	2×1, 1×2
		384*216	3	3×1, 1×3
		320*180	5	5×1, 2×2, 1×5
		256*512	2	2×1, 1×2
		256*256	5	2×1, 1×2
		168*168	11	11×1, 5×2, 3×3, 2×5, 1×10
		128*128	20	20×1, 10×2, 6×3, 5×4, 3×5, 3×6, 2×9, 1×17
	240Hz	480*270	1	1×1
		384*216	1	1×1
		320*180	2	2×1, 1×2
		256*512	1	1×1
		256*256	2	2×1, 1×2
		168*168	5	5×1, 2×2, 1×5
		128*128	10	10×1, 5×2, 3×3, 2×4, 1×9

Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
1G Ethernet port (10-bit)	60Hz	768*432	1	1×1
		640*360	2	2×1, 1×2
		480*270	3	5×1, 2×2, 1×5
		384*216	5	7×1, 3×2, 2×3, 1×7
		320*180	8	10×1, 5×2, 3×3, 2×5, 1×10
		256*512	3	3×1, 1×3
		256*256	7	7×1, 3×2, 2×3, 1×7
		168*168	17	17×1, 8×2, 5×3, 4×4, 3×5, 2×8, 1×16
		128*128	30	30×1, 15×2, 10×3, 7×4, 6×5, 4×6, 4×7, 3×9, 2×14, 1×27
	120Hz	640*360	1	1×1
		480*270	1	2×1, 1×2
		384*216	2	3×1, 1×3
		320*180	4	5×1, 2×2, 1×5
		256*512	1	1×1
		256*256	3	3×1, 1×3
		168*168	8	8×1, 4×2, 2×4, 1×8
		128*128	15	15×1, 7×2, 5×3, 3×4, 2×7, 1×13
	240Hz	480*270	1	1×1
		384*216	1	1×1
		320*180	2	2×1, 1×2
		256*256	1	1×1
		168*168	4	4×1, 2×2, 1×4
		128*128	7	7×1, 3×2, 2×3, 1×6


Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
5G Ethernet port (8-bit)	60Hz	1280*720	3	3×1, 1×3
		768*432	8	8×1, 4×2, 2×4, 1×8
		640*360	12	12×1, 6×2, 4×3, 3×4, 2×6, 1×12
		480*270	22	22×1, 11×2, 7×3, 5×4, 3×7, 4×5, 2×11, 1×22
		384*216	35	35×1, 17×2, 11×3, 8×4, 7×5, 5×7, 4×8, 3×11, 2×17, 1×35
		320*180	51	51×1, 25×2, 17×3, 12×4, 10×5, 8×6, 7×7, 6×8, 5×10, 4×12, 3×17, 2×25
		256*512	22	22×1, 11×2, 7×3, 5×4, 4×5, 3×7, 2×10, 1×21
		256*256	45	45×1, 22×2, 15×3, 11×4, 9×5, 7×6, 6×7, 5×9, 4×11, 3×14, 2×21, 1×43
		168*168	104	104×1, 52×2, 20×5, 10×10, 9×11, 5×20, 2×51, 1×96...
		128*128	180	180×1, 90×2, 36×5, 18×10, 13×13, 10×18, 5×35, 2×86, 1×160...
	120Hz	1280*720	1	1×1
		768*432	4	4×1, 2×2, 1×4
		640*360	6	6×1, 2×3, 3×2, 1×6
		480*270	11	11×1, 5×2, 3×3, 2×5, 1×11
		384*216	17	17×1, 8×2, 5×3, 4×4, 3×5, 2×8, 1×17
		320*180	25	25×1, 12×2, 8×3, 6×4, 5×5, 4×6, 3×8, 2×12, 1×25
		256*512	11	11×1, 5×2, 3×3, 2×5, 1×10
		256*256	22	22×1, 11×2, 7×3, 5×4, 4×5, 3×7, 2×10, 1×21
		168*168	52	52×1, 26×2, 17×3, 13×4, 10×5, 8×6, 7×7, 6×8, 5×10, 4×12, 3×16, 2×25, 1×48
		128*128	90	90×1, 45×2, 18×5, 10×9, 9×10, 5×17, 2×43, 1×80...

06 CABINET COUNT LOADED

Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
5G Ethernet port (8-bit)	240Hz	768*432	2	2×1, 1×2
		640*360	3	3×1, 1×3
		480*270	5	5×1, 2×2, 1×5
		384*216	8	8×1, 4×2, 2×4, 1×8
		320*180	12	12×1, 6×2, 4×3, 3×4, 2×6, 1×12
		256*512	5	5×1, 2×2, 1×5
		256*256	11	11×1, 5×2, 3×3, 2×5, 1×10
		168*168	26	26×1, 13×2, 8×3, 6×4, 5×5, 4×6, 3×8, 2×12, 1×24
128*128	45	45×1, 22×2, 15×3, 11×4, 9×5, 7×6, 6×7, 5×8, 4×10, 3×14, 2×21, 1×40		

Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
5G Ethernet port (10-bit)	60Hz	1280*720	2	2×1, 1×2
		768*432	6	6×1, 2×3, 3×2, 1×6
		640*360	9	9×1, 4×2, 3×3, 2×4, 1×9
		480*270	17	17×1, 8×2, 5×3, 4×4, 3×5, 2×8, 1×17
		384*216	26	26×1, 13×2, 8×3, 6×4, 5×5, 4×6, 3×8, 2×13, 1×26
		320*180	38	38×1, 19×2, 12×3, 9×4, 7×5, 6×6, 5×7, 4×9, 3×12, 2×19, 1×38
		256*512	17	17×1, 8×2, 5×3, 4×4, 3×5, 2×8, 1×16
		256*256	34	34×1, 17×2, 11×3, 8×4, 6×5, 5×6, 4×8, 3×11, 2×16, 1×33
		168*168	79	79×1, 38×2, 15×5, 9×8, 8×9, 5×15, 2×39, 1×74...
		128*128	136	136×1, 68×2, 27×5, 12×11, 11×12, 5×27, 2×66, 1×125...

Ethernet Port	Frame Rate	Cabinet Pixels	Cabinet Count	Layout
5G Ethernet port (10-bit)	120Hz	1280*720	1	1×1
		768*432	3	3×1, 1×3
		640*360	4	4×1, 2×2, 1×4
		480*270	8	8×1, 4×2, 2×4, 1×8
		384*216	13	13×1, 6×2, 4×3, 3×4, 2×6, 1×13
		320*180	19	19×1, 9×2, 6×3, 4×4, 3×6, 2×9, 1×19
		256*512	8	8×1, 4×2, 2×4, 1×8
		256*256	17	17×1, 8×2, 5×3, 4×4, 3×5, 2×8, 1×16
		168*168	39	39×1
	128*128	68	68×1, 34×2, 13×5, 11×6, 8×8, 6×11, 5×13, 2×33, 1×62...	
	240Hz	768*432	1	1×1
		640*360	2	2×1, 1×2
		480*270	4	4×1, 2×2, 1×4
		384*216	6	6×1, 2×3, 3×2, 1×6
		320*180	9	9×1, 4×2, 3×3, 2×4, 1×9
		256*512	4	4×1, 2×2, 1×4
		256*256	8	8×1, 4×2, 2×4, 1×8
		168*168	19	19×1, 9×2, 6×3, 4×4, 3×6, 2×9, 1×18
128*128		34	34×1, 17×2, 11×3, 8×4, 6×5, 5×6, 4×8, 3×10, 2×16, 1×31	

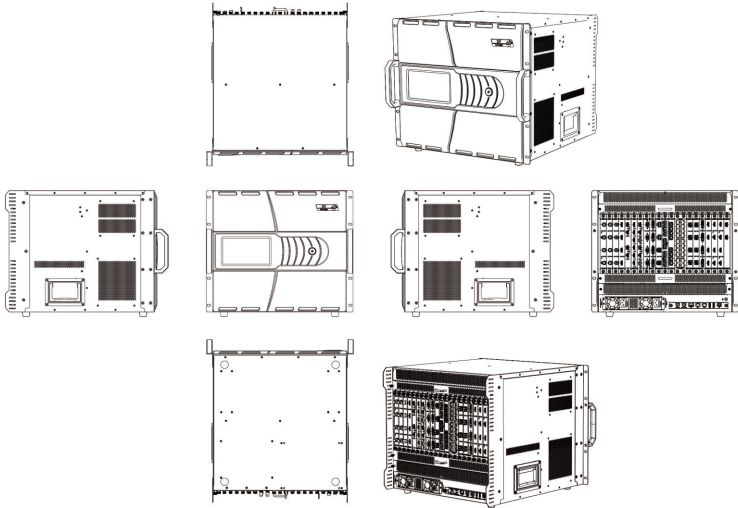
 Note: The above parameters are based on standard cabinets. For details on other cabinets, please contact technical support.

07 DEVICE SPECIFICATIONS

Product Properties		
Series	Universe	
Model	U9 Max	
Input Specifications		
Max. input boards	18	
Max. inputs	36×4K@60Hz / 108×2K@60Hz	
Output Specifications		
Max. output boards	10	
Max. outputs	20×4K@60Hz / 60×2K@60Hz	
Max. load capacity (LED)	1G Ethernet port	65 million pixels
	5G Ethernet port	236 million pixels
	10G fiber port	260 million pixels
Number of Layers		
Max. layers	160	
Physical Dimensions (W×H×D)		
Device	482.6 mm (19.0")×399.3 mm (15.7")×535.2 mm (21.1") (excluding rubber feet)	
Packing	678.0mm (25.8")×643.0mm (26.0")×575.0mm (24.4")	
Weight		
Net	27kg (59.52lbs)	
Gross	36kg (79.37lbs)	
Electrical Parameters		
Power supply	AC100-240V, 50/60Hz, supports dual power supplies (a redundant power supply is optional).	
Max. power consumption	650W	

Operating Environment		
Temperature	10°C~45°C (50°F~113°F)	
Humidity	0% RH~85% RH, non-condensing	
Storage Environment		
Temperature	-10°C~60°C (14°F~140°F)	
Humidity	0% RH~95% RH, non-condensing	
Placement Requirement		
This device can only be placed horizontally. Do not invert the device or place it vertically.		
Others		
Noise level (typical at 25°C/77°F)	< 45 dB(A)	
Accessories	U9 Video Splicer	1PC
	Quick Start Guide	1PC
	Warranty Card	1PC
	Certificate	1PC
	Gigabit Ethernet cable	1PC
	Power cable	1PC / 2PCS (Optional redundant power supply comes with an additional cable.)
	Brush	1PC
	Grounding cable	1PC
	HDMI 2.0 cable	1PC (Optional board comes with an additional cable.)
	DP 1.2 cable	1PC (Optional board comes with an additional cable.)
	DVI cable	1PC (Optional board comes with an additional cable.)

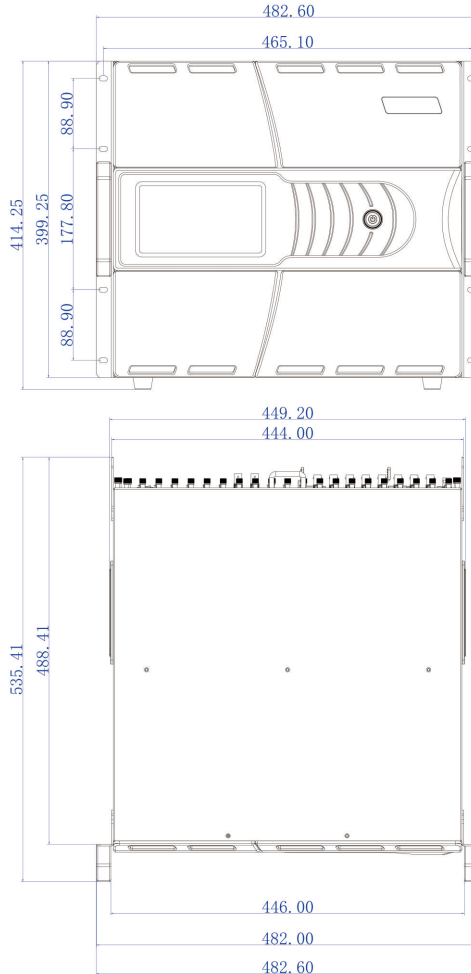
08 6 PRINCIPAL VIEWS



09 REFERENCE DIMENSIONS

Unit: mm


Tolerance: $\pm 0.2\text{mm}$



10 STATEMENTS

10.1 Certifications

CCC, CE, UKCA, FCC, IC, CB, cTUVus, KC, RCM, EAC, RoHS, REACH, BIS

 Note: 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 as soon as possible. Otherwise, the customer shall be responsible for the legal risks or Colorlight has the right to claim compensation.

10.2 Legal Statement

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