

Colorlight



reddot winner 2026

# U3 Max

Video Splicer

Specification V1.0



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## Revision History

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Version	Date	Description
V1.0	2026.06.01	<ul style="list-style-type: none"><li data-bbox="451 330 614 353">• Initial release</li></ul>

# 01 PRODUCT INTRODUCTION

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## 1.1 Overview

The U3 Max is Colorlight's next generation video splicer, featuring an integrated video processing and splicing solution. Powered by a robust FPGA architecture, the U3 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 U3 Max delivers unparalleled reliability and performance.

In addition to an impressive load capacity of 78 million pixels, the U3 Max boasts a modular design that supports flexible combinations of 32 types of boards. It can accommodate 4 to 5 input boards and 3 output boards, with a total of 8 slots available. Input ports include HDMI, DisplayPort (DP), SDI, DVI, HDBaseT, IP, VGA, and CVBS, while output options feature Gigabit Ethernet (GbE), 5G Ethernet, 10G fiber, HDMI, DVI, SDI, and HDBaseT.

The U3 Max is capable of managing various screen types, delivering 4K HDR ultra high-quality video with 10-bit video input and processing. It supports video source cropping, scaling, along with the addition of various display elements, such as background images, OSD, 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, health monitoring, and email alerts. This versatility makes the U3 Max well-suited for small-pitch LED video walls, LCD video walls, and projection screens.

The Universe series lets you control and manage devices across multiple platforms, such as Windows, macOS, and Linux, all through a web app. With an intuitive user interface, the series enables smooth workflows including real-time collaboration and modular permission management.

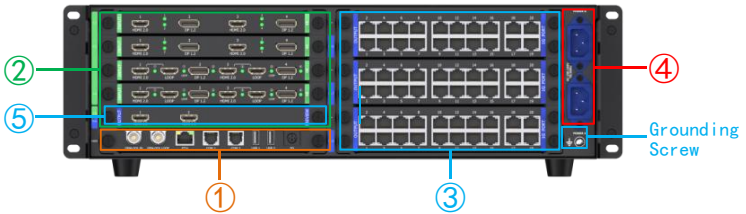
## 1.2 Appearance

### Front Panel



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

### Rear Panel



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 17 types of input boards. <ul style="list-style-type: none"> <li>I-1 to I-5 are input slots.</li> <li>I-5 can be used for either input or preview boards.</li> </ul>
3	Output board	Supports 15 types of output boards. <ul style="list-style-type: none"> <li>O-6 to O-8 are output slots.</li> </ul>

## 01 PRODUCT INFORMATION

		<ul style="list-style-type: none"><li>Slot marked "-" is an empty slot; it is used only with the U_20 1G Ethernet output board.</li></ul>
4	Power supply	AC 100-240V, 50/60Hz, supports dual power supplies (standard).
5	Preview board	2×HDMI 2.0 ports: Connects to external monitors for input preview and output monitoring (preview board optional).



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-6" indicates that the 6th output slot can only be used for an output board.
- Slot marked "I-5/MVR" can be used for either input or preview boards.
- Slot marked "-" is an empty slot; it must be used with the U\_20 1G Ethernet output board. Otherwise, a filler panel is required.

## 02 FEATURES

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### Modular Design Flexible Combination

- 3 LED screen solutions:
  - 10G fiber output: Loads up to 26 million pixels per board and 78 million pixels per device.
  - 5G Ethernet output: Loads up to 23.6 million pixels per board and 70.8 million pixels per device.
  - 1G Ethernet output: Loads up to 13 million pixels per board and 39 million pixels per device.
- LCD/Projection screen solutions:
  - HDMI 2.0 video output: Loads up to 2× 4K×2K@60Hz per board.
  - HDMI 1.4 video output: Loads up to 4× 4K×1K@60Hz per board.
  - HDMI 1.3 video output: Loads up to 8× 2K×1K@60Hz per board.
  - DVI video output: Loads up to 4× 2K×1K@60Hz per board.
- Supports LED, LCD, and projection screen solutions simultaneously.
- Supports 32 types of hot-swappable I/O boards. Input slots accommodate 4 to 5 boards, and output slots accommodate 3 boards:
  - Input ports: HDMI 2.0, DP 1.2, 12G-SDI, 3G-SDI, IP, HDMI 1.3, DVI, VGA, CVBS, HDBaseT 3.0.
  - Output ports: HDMI 2.0, HDMI 1.4, HDMI 1.3, DVI, HDBaseT 3.0, 12G-SDI, 3G-SDI, 10G fiber, 5G fiber, 2.5G fiber, 5G Ethernet, 1G Ethernet.
- Monitors the status of all boards in real time.
- Input and output frame rates range from 23.98Hz to 240Hz.

### Multiple Screen Management

- Screen group management: Up to 3 LCD or LED screen groups.
- 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 video walls.
- Bezel compensation for LCD video walls.

### 4K HDR Impeccable Visuals

- DCI 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:
  - 48×2K or 12×4K 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.
- Pre-edit.
- Low latency with a minimum system latency of 1 frame.
- 3D display (single 3D, dual 3D, and frame sequential 3D).
- Precise color management.
- Multiple color formats:
  - RGB, YCbCr444, YCbCr422, YCbCr420.
- Color management by input sources, output ports, and screens.
  - Adjusts brightness, color temperature, saturation, hue, contrast, brightness compensation, and RGB.

### Diversified Display

- BKG: Supports UHD images with a maximum height/width of 32,768 pixels; BKG does not use up any layers.
- OSD (image, text, and video):
  - Scrolling text, image display, and video playback.
  - Adjustable OSD transparency for superimposing.
  - Custom direction, speed, and style for text OSD..
- Signal logo: Supports adding image or text logos for identifying input sources.
- Custom layer borders with adjustable thickness and color.
- Advanced test patterns: Includes up to 15 built-in test patterns, each capable of displaying any color.

### All-Round Multiviewer

- 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 an Ethernet cable.
- HD LCD on front panel: On-device input preview and output monitoring, with no external devices required.

### Web Control All-in-One Web Control

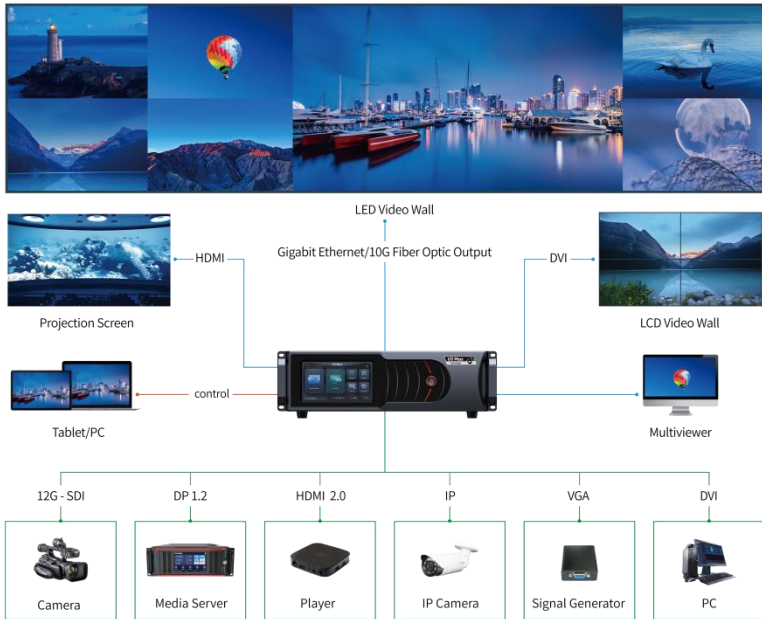
- Cross-platform web control that enables multi-user collaboration.
- Screen/device management, input configuration, and splicing settings.
- Screen mapping, screen parameter transmission, and advanced seam correction.
- Control via the Kylin VICP (Visualization Intelligent Control Platform) mobile app.
- Intuitive user interface with on-screen instructions.
- Up to 6,000 presets: Real-time application and scheduled loop.

- Supports a web simulator, allowing configuration and import/export operations while the device is offline.
- LEDMaster for remote device and screen management.
- SyncLink for simultaneous control of multiple devices within a LAN; primary-backup support.

### Secure and Stable

- Dual power supplies for 24/7 uptime.
- Parameter snapshot, as well as multiple redundancies for Ethernet, fiber, and devices.
- Permission management and log record.
- Real-time monitoring and alerts:
  - Monitors device status, power status, and fan speed.
  - Monitors screen connection status, runtime, temperature and humidity, and bit error rates.
  - Supports multi-platform monitoring via web, mobile app, and front panel.

## 03 APPLICATIONS



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

## 04 BOARD SPECIFICATIONS

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### 4.1 Input Boards

17 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_2×IP input board	U_IN_2IP
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_8×HDMI 1.3 input board	U_IN_8HDMI13
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
U_Central control input board	U_IN_CENTRAL_CONTROL
U_Multimedia input board	U_IN_MultiMedia
U_4×HDBaseT 3.0 input board	U_IN_4HDBaseT3

Number of input boards per device:

- Max. input boards: 5

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 × HDMI 2.0

- 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 limit: 8192 pixels, height limit: 8188 pixels (forced by external signals).
- 8/10/12-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 × HDMI 2.0\_LOOP

- 2 × HDMI 2.0 loop-out ports.


#### 2 × DP 1.2

- 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.

Details

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>• Supports custom resolutions through EDID/DisplayID configuration:             <ul style="list-style-type: none"> <li>- Maximum width: 8192 pixels (8192×1080@60Hz).</li> <li>- Maximum height: 8092 pixels (1024×8192@60Hz).</li> </ul> </li> <li>• Width limit: 8192 pixels, height limit: 8092 pixels.</li> <li>• 8/10-bit input.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Frame rates: 23.98Hz ~ 240Hz.</li> <li>• Supports HDR10 and HLG.</li> <li>• Supports HDCP2.2 and HDCP1.4.</li> <li>• Supports embedded audio input.</li> <li>• Progressive only.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 500 g (17.6 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 26W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Sections 5.1.1 and 5.1.2.</li> </ul>

Name: U_1×HDMI 2.0+1×DP 1.2 Input Board		Model: U_IN_1HDMI20_1DP12	
Details	 <p>One group of 4K input ports: Each group includes 1×HDMI 2.0 &amp; 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.</p> <p>1×HDMI 2.0</p>		

- 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 (4096×2160@60Hz).
  - Maximum height: 4095 pixels (2160×4095@60Hz).
- Width limit: 8192 pixels, height limit: 8188 pixels (forced by external signals).
- 8/10/12-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.

### 1×HDMI 2.0\_LOOP

- 1×HDMI 2.0 loop-out ports.

### 1×DP 1.2

- 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 width: 8192 pixels (8192×1080@60Hz).
  - Maximum height: 8192 pixels (1024×8192@60Hz).
- Width limit: 8192 pixels, height limit: 8092 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.

## 04 BOARD SPECIFICATIONS

	<p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 480 g (16.9 oz)</li> <li>• Dimensions: 193 mm (7.6'')×243.2 mm (9.6'')×19.82 mm (0.8'')</li> <li>• Power consumption: 20W</li> </ul>
<p>Tech Specs</p>	<ul style="list-style-type: none"> <li>• For video specifications, refer to Sections 5.1.1 and 5.1.2.</li> </ul>

Name: U\_4×DVI Input Board

Model: U\_IN\_4DVI

Details




4×DVI

- Supports both SL-DVI and DL-DVI.
- SL-DVI:
  - ① Ports 1 and 3 can be used as SL-DVI inputs.
  - ② Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048×1080@60Hz/4096×512@60Hz.
  - ③ Supports custom resolutions through EDID configuration:
    - Maximum width: 4095 pixels (4095×512@60Hz).
    - Maximum height: 4095 pixels (512×4095@60Hz).
  - ④ Width/height limit: 4096 pixels (forced by external signal).
- DL-DVI:
  - ① Ports 2 and 4 can be used as DL-DVI inputs.
  - ② Each port supports a maximum pixel clock of 330MHz; video inputs up to 4096×1080@60Hz/4096×2160@30Hz.
  - ③ Supports custom resolutions through EDID configuration:

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>- Maximum weight: 4095 pixels (4095 × 1080@60Hz).</li> <li>- Maximum height: 4095 pixels (1080 × 4095@60Hz).</li> <li>④ Width/height limit: 4096 pixels (forced by external signal).</li> </ul> <ul style="list-style-type: none"> <li>• 8-bit input.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Progressive only.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 415 g (14.6 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 9W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Sections 5.1.3 and 5.1.4.</li> </ul>


Name: U_2 × 12G-SDI Input Board		Model: U_IN_2 × 12GSDI	
Details	 <p>2 × 12G-SDI</p> <ul style="list-style-type: none"> <li>• Backwards compatible with 6G-SDI, 3G-SDI (Level A/B), HD-SDI, and SD-SDI.</li> <li>• Supports SMPTE ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards.</li> <li>• Each port supports a maximum video input of 4096 × 2160@60Hz.</li> <li>• 10-bit input.</li> </ul>		

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>• Frame rates: 23.98Hz ~ 60Hz.</li> <li>• Color format: YCbCr422.</li> <li>• Supports signal de-interlacing: 480i/576i/1080i.</li> </ul> <p>2× 12G-SDI_LOOP</p> <ul style="list-style-type: none"> <li>• 2× 12G-SDI loop-out ports.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 455 g (16.0 oz)</li> <li>• Dimensions: 193 mm (7.6'')× 243.2 mm (9.6'')× 19.82 mm (0.8'')</li> <li>• Power consumption: 11W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.5.</li> </ul>


Name: U\_1× 12G-SDI Input Board

Model: U\_IN\_1× 12GSDI

Details	 <p>1× 12G-SDI</p> <ul style="list-style-type: none"> <li>• Backwards compatible with 6G-SDI, 3G-SDI (Level A/B), HD-SDI, and SD-SDI.</li> <li>• Supports SMPTE ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards.</li> <li>• Each port supports a maximum video input of 4096× 2160@60Hz.</li> <li>• 10-bit input.</li> <li>• Frame rates: 23.98Hz ~ 60Hz.</li> <li>• Color format: YCbCr422.</li> <li>• Supports signal de-interlacing: 480i/576i/1080i.</li> </ul>
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## 04 BOARD SPECIFICATIONS

	<p>1 × 12G-SDI_LOOP</p> <ul style="list-style-type: none"><li>• 1 × 12G-SDI loop-out ports.</li></ul> <p>Status LEDs</p> <ul style="list-style-type: none"><li>• Off: Power supply failure.</li><li>• Solid green: Normal power supply.</li><li>• Blinking green: Normal video input.</li></ul> <p>Specifications</p> <ul style="list-style-type: none"><li>• Weight: 435 g (15.3 oz)</li><li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li><li>• Power consumption: 10W</li></ul>
Tech Specs	<ul style="list-style-type: none"><li>• For video specifications, refer to Section 5.1.5.</li></ul>

Name: U_4 × 3G-SDI Input Board		Model: U_IN_4 × 3GSDI
Details	 <p>4 × 3G-SDI</p> <ul style="list-style-type: none"><li>• Backwards compatible with HD-SDI and SD-SDI.</li><li>• Supports SMPTE ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards.</li><li>• Each port supports a maximum video input of 2048 × 1080@60Hz.</li><li>• Supported formats: Level A and Level B.</li><li>• 10-bit input.</li><li>• Frame rates: 23.98Hz ~ 60Hz.</li><li>• Color format: YCbCr422.</li><li>• Supports signal de-interlacing: 480i/576i/1080i.</li></ul> <p>Status LEDs</p> <ul style="list-style-type: none"><li>• Off: Power supply failure.</li><li>• Solid green: Normal power supply.</li><li>• Blinking green: Normal video input.</li></ul>	


## 04 BOARD SPECIFICATIONS

	<p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 470 g (16.6 oz)</li> <li>• Dimensions: 193 mm (7.6'')×243.2 mm (9.6'')×19.82 mm (0.8'')</li> <li>• Power consumption: 9W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.6.</li> </ul>


Name: U_4×HDMI 1.3 Input Board		Model: U_IN_4HDMI13	
Details	 <p>4×HDMI 1.3</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048×1080@60Hz.</li> <li>• Supports custom resolutions through EDID configuration:             <ul style="list-style-type: none"> <li>- Maximum width: 4095 pixels (4095×512@60Hz).</li> <li>- Maximum height: 4095 pixels (512×4095@60Hz).</li> </ul> </li> <li>• Width/height limit: 4096 pixels (forced by external signal).</li> <li>• 8-bit input.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio input.</li> <li>• Progressive only.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 395 g (13.9 oz)</li> </ul>		

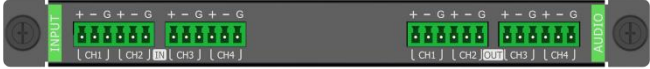
## 04 BOARD SPECIFICATIONS

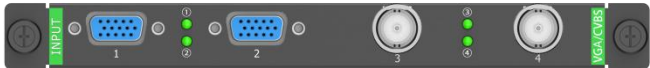
	<ul style="list-style-type: none"> <li>• Dimensions: 193 mm (7.6'') × 243.2 mm (9.6'') × 19.82 mm (0.8'')</li> <li>• Power consumption: 9W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.7.</li> </ul>

Name: U_6×HDMI 1.3 Input Board		Model: U_IN_6HDMI13
Details	 <p>6×HDMI 1.3</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048×1080@60Hz.</li> <li>• Supports custom resolutions through EDID configuration:             <ul style="list-style-type: none"> <li>- Maximum width: 4095 pixels (4095×512@60Hz).</li> <li>- Maximum height: 4095 pixels (512×4095@60Hz).</li> </ul> </li> <li>• Width/height limit: 4096 pixels (forced by external signal).</li> <li>• 8-bit input.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio input.</li> <li>• Progressive only.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 415 g (14.6 oz)</li> <li>• Dimensions: 193 mm (7.6'') × 243.2 mm (9.6'') × 19.82 mm (0.8'')</li> <li>• Power consumption: 11W</li> </ul>	

## 04 BOARD SPECIFICATIONS


Tech Specs	<ul style="list-style-type: none"> <li>For video specifications, refer to Section 5.1.7.</li> </ul>
<div style="display: flex; justify-content: space-between; background-color: #00b050; color: white; padding: 5px;"> <span>Name: U_8×HDMI 1.3 Input Board</span> <span>Model: U_IN_8HDMI13</span> </div>	
Details	 <p>8× HDMI 1.3</p> <ul style="list-style-type: none"> <li>Each port supports a maximum pixel clock of 165MHz; video inputs up to 2048×1080@60Hz.</li> <li>Supports custom resolutions through EDID configuration:             <ul style="list-style-type: none"> <li>Maximum width: 4095 pixels (4095×512@60Hz).</li> <li>Maximum height: 4095 pixels (512×4095@60Hz).</li> </ul> </li> <li>Width/height limit: 4096 pixels (forced by external signal).</li> <li>8-bit input.</li> <li>Frame rates: 23.98Hz ~ 120Hz.</li> <li>Color formats: RGB, YCbCr444, YCbCr422.</li> <li>Supports HDCP1.4.</li> <li>Supports embedded audio input.</li> <li>Progressive only.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>Off: Power supply failure.</li> <li>Solid green: Normal power supply.</li> <li>Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>Weight: 415 g (14.6 oz)</li> <li>Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>Power consumption: 16W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>For video specifications, refer to Section 5.1.7.</li> </ul>

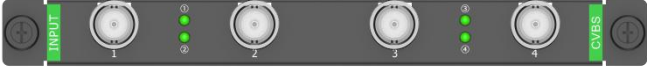
Name: U_4×AUDIO Input Board		Model: U_IN_4AUDIO
Details	 <p>8× Phoenix connectors</p> <ul style="list-style-type: none"> <li>• 8 audio channels, each supporting both input and output.</li> <li>• Supports single channel and dual channel modes.</li> <li>• Single channel mode             <ul style="list-style-type: none"> <li>- 4 audio inputs and 4 audio outputs.</li> </ul> </li> <li>• Dual channel mode             <ul style="list-style-type: none"> <li>- 2 audio inputs and 2 audio outputs.</li> </ul> </li> <li>• Audio sampling rate: 48kHz.</li> <li>• Sources of output audio             <ul style="list-style-type: none"> <li>- Embedded audio from the input video.</li> <li>- Audio input from the audio board.</li> </ul> </li> <li>• Supports switching between single channel and dual channel modes.</li> <li>• Supports output volume adjustment and one-click mute.</li> <li>• Supports audio output delay.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 480 g (16.9 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 10W</li> </ul>	

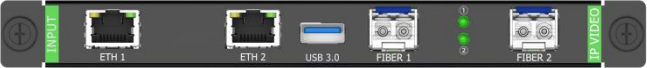
Name: U_2×VGA+2×CVBS Input Board		Model: U_IN_2VGA_2CVBS
Details	 <p>2×VGA</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum video input of 1920×1200@60Hz.</li> </ul> <p>2×CVBS</p>	

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>• Supports both PAL and NTSC standards.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 420 g (14.8 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 10W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.8.</li> </ul>

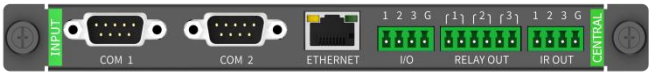
Name: U_4 × VGA Input Board		Model: U_IN_4VGA
Details	 <p>4 × VGA</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum video input of 1920 × 1200@60Hz.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 420 g (14.8 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 10W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.8.</li> </ul>	

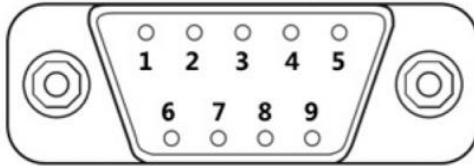
Name: U_4×CVBS Input Board		Model: U_IN_4CVBS
Details	 <p>4 × CVBS</p> <ul style="list-style-type: none"> <li>• Supports both PAL and NTSC standards.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video input.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 420 g (14.8 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 10W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.1.8.</li> </ul>	

Name: U_2×IP Input Board		Model: U_IN_2IP
Details	 <p>Use either ETH1 or FIBER1, and either ETH2 or FIBER2. Ports are self-adaptive, with fiber ports preferred.</p> <p>2 × RJ45 GbE ports</p> <ul style="list-style-type: none"> <li>• Supports independent connection to network video sources and redundancy.</li> <li>• Supports H.264 (AVC) and H.265 (HEVC) video encoding standards.</li> <li>• Supported protocols: GB28181, ONVIF.</li> <li>• Supports RTSP protocol.</li> </ul>	

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>Decoding capacity per board:             <ul style="list-style-type: none"> <li>- 8× 3840×2160@30Hz.</li> <li>- 18× 2560×1440@30Hz.</li> <li>- 32× 1920×1080@30Hz.</li> <li>- 64× 720×576@30Hz.</li> </ul> </li> <li>Supports DHCP.</li> </ul> <p>2×1G FIBER</p> <ul style="list-style-type: none"> <li>Refer to 2×RJ45 GbE ports.</li> </ul> <p>1×USB 3.0 (Reserved)</p> <p>Status LEDs (ETH)</p> <ul style="list-style-type: none"> <li>Off: Power supply failure.</li> <li>Solid green: Normal power supply.</li> <li>Blinking orange: Normal data communication.</li> </ul> <p>Status LEDs (FIBER)</p> <ul style="list-style-type: none"> <li>Off: Power supply failure.</li> <li>Solid green: Normal power supply.</li> <li>Blinking green: Normal fiber connection.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>Weight: 500 g (17.6 oz)</li> <li>Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>Power consumption: 12W</li> </ul>
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Name: U_Central Control Input Board		Model: U_IN_CENTRAL_CONTROL	
Details			
	<p>2×COM</p> <ul style="list-style-type: none"> <li>RS-232/RS-422/RS-485 serial ports; compatible with devices using RS-232/RS-422/RS-485 control protocols.</li> <li>COM connector pinout</li> </ul>		



• Pin assignment and wiring

PIN	1	2	3	4	5	6	7	8	9
RS232	—	RXD	TXD	—	GND	—	—	—	—
RS422	RXD-	—	—	TXD+	GND	RXD+	—	—	TXD-
RS485	—	—	—	A	—	—	—	—	B

1×ETH

- Supports network-based control of external devices.
- Supported protocols: TCP/IP, UDP
- Bandwidth: 10/100 Mbps, auto-negotiation

3×I/O

- Supports user-defined command programming to control various terminal device functions.
- Pins 1, 2, and 3 are configurable as input or output; pin G serves as the common ground.

3×RELAY OUT

- Supports power on/off control of external devices via relay switching.
- Voltage: DC 30V; Current: 0 - 3A.
- Each relay output (up to 3) has 2 pins used to connect or disconnect external devices.


3×IR OUT


- Supports IR-based control of external devices.
- Supports importing learned IR commands.
- Pins 1, 2, and 3 function as IR outputs; pin G serves as the common ground.

Specifications

## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"><li>• Weight: 415 g (14.6 oz)</li><li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li><li>• Power consumption: 10W</li></ul>
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Name: U_Multimedia Board		Model: U_IN_MultiMedia	
Details	 The image shows the front panel of the U_Multimedia Board. From left to right, it features a power button, a green LED labeled 'INPUT', an Ethernet port labeled 'ETH', a LAN port labeled 'LAN', a USB 3.0 port labeled 'USB 3.0', a green LED labeled 'LAN', and another power button.		
	<p>1 × ETH GbE port</p> <ul style="list-style-type: none"><li>• Used to connect to an external network.</li><li>• Supports auto-negotiation between gigabit and 100M networks.</li><li>• Supports DHCP.</li></ul> <p>1 × LAN GbE port</p> <ul style="list-style-type: none"><li>• Used to configure multimedia content.<ul style="list-style-type: none"><li>- World clock with customizable style, font, size, and time zone.</li><li>- Supports custom weather, environment, news, streaming media, web content, and local files.</li></ul></li><li>• Supports auto-negotiation between gigabit and 100M networks.</li><li>• Supports DHCP.</li></ul> <p>1 × USB 3.0 (Reserved)</p> <p>Status LEDs (ETH)</p> <ul style="list-style-type: none"><li>• Off: Power supply failure.</li><li>• Solid green: Normal power supply.</li><li>• Blinking orange: Normal data communication.</li></ul> <p>Specifications</p> <ul style="list-style-type: none"><li>• Weight: 500 g (17.6 oz)</li><li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li><li>• Power consumption: 12W</li></ul>		

Name: U_4×HDBaseT 3.0 Input Board		Model: U_IN_4HDBaseT3
Details	 <p>4×HDBaseT 3.0</p> <ul style="list-style-type: none"> <li>• Supports three modes: 4K60, 4K30, and 2K60: <ul style="list-style-type: none"> <li>- 4K60 mode: Up to 2 ports; select one from each pair (1/2 and 3/4).</li> <li>- 4K30 &amp; 2K60 modes: All 4 ports can be used.</li> </ul> </li> <li>• 8/10-bit input.</li> <li>• Supports HDR.</li> <li>• Supports HDCP 2.2 and HDCP 1.4.</li> <li>• Supports embedded audio input.</li> <li>• Supports EDID configuration.</li> <li>• Supports a maximum transmission distance of 70 m: <ul style="list-style-type: none"> <li>- 4K60: Requires shielded Cat6a cable and shielded Ethernet jacks.</li> <li>- 4K30: Requires shielded Cat6 cable and shielded Ethernet jacks.</li> </ul> </li> </ul> <p>Status LEDs (ETH)</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking orange: Normal data communication.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 500 g (17.6 oz)</li> <li>• Dimensions: 193 mm (7.6'')×243.2 mm (9.6'')×19.82 mm (0.8'')</li> <li>• Power consumption: 33W</li> </ul>	

## 4.2 Output Boards

15 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_4×5G fiber output board	U_OUT_4×5G_FIBER
U_4×10G fiber to 8×5G Ethernet output board	U_OUT_4×10_to_8×5G_FIBER
U_4×2.5G fiber output board	U_OUT_4×2.5G_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_8×HDMI 1.3 output board	U_OUT_8HDMI13
U_2×12G-SDI output board	U_OUT_2×12GSDI
U_4×3G-SDI output board	U_OUT_4×3GSDI
U_4×DVI output board	U_OUT_4DVI
U_4×HDBaseT 3.0 output board	U_OUT_4HDBaseT3

Number of output boards per device:

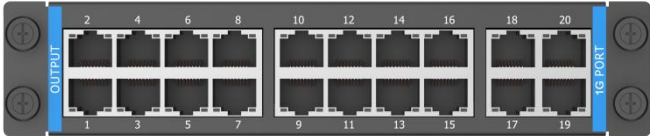
Max. output boards	3	
Output Boards	Max. Output Ports	Max. Load Capacity
U_20×1G Ethernet output board	60	39 million pixels
U_8×5G Ethernet output board	24	70.8 million pixels

## 04 BOARD SPECIFICATIONS

U_4×10G fiber output board	12	78 million pixels
U_2×HDMI 2.0 output board	6	24576×2160@60Hz
U_1×HDMI 2.0 output board	3	12288×2160@60Hz
U_4×HDMI 1.4 output board	12	24576×2160@60Hz
U_6×HDMI 1.3 output board	18	18432×2160@60Hz
U_8×HDMI 1.3 output board	24	24576×2160@60Hz
U_2×12G-SDI output board	6	24576×2160@60Hz
U_4×3G-SDI output board	12	12288×2160@60Hz
U_4×DVI output board	12	12288×2160@60Hz
U_4×HDBaseT 3.0 output board	12	24576×2160@60Hz

Name: U_20×1G Ethernet Output Board	Model: U_OUT_20×1G_RJ45
-------------------------------------	-------------------------

Details



As an LED sending card, this board loads up to 13 million pixels, with a maximum width of 32768 and a maximum 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 (21.0 oz)
- Dimensions: 193 mm (7.6'')×243.2 mm (9.6'')×19.82 mm (0.8'')
- Power consumption: 40W

Load Capacity per Board	Frame Rate (Hz)	Color Depth (bit)	Pixels
	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
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Details	 <p>As an LED sending card, this board loads up to 23.6 million pixels, with a maximum width of 32768 and a maximum height of 16384 pixels. Use with a shielded Cat6A cable.</p> <p>8×RJ45 5G Ethernet ports</p> <ul style="list-style-type: none"> <li>• 8/10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 240Hz.</li> <li>• Supports loop redundancy between Ethernet ports.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply; normal cable connection.</li> <li>• Blinking orange: Normal data communication.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 510 g (18.0 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 28W</li> </ul>
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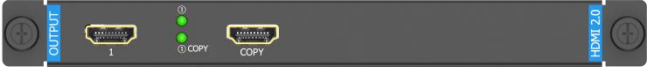
Load Capacity per Board	Frame Rate (Hz)	Color Depth (bit)	Pixels
	60	8	23.6 million
		10	17.7 million
	120	8	11.8 million
		10	8.85 million
	240	8	5.9 million
10		4.42 million	


Name: U_4 × 10G fiber Output Board		Model: U_OUT_4 × 10G_FIBER	
Details			
	<p>As an LED sending card, this board loads up to 26 million pixels, with a maximum width of 32768 and a maximum height of 16384 pixels. Use with a dedicated fiber optic transceiver.</p> <p>4 × 10G fiber</p> <ul style="list-style-type: none"> <li>• Supports 3 operating modes: independent, redundancy, and copy.</li> <li>• Independent mode <ul style="list-style-type: none"> <li>- All 4 fiber ports are used for output. Each port can be converted to 10 × 1G Ethernet ports via fiber optic transceivers.</li> </ul> </li> <li>• Redundancy mode <ul style="list-style-type: none"> <li>- 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.</li> <li>- To enable redundancy mode, the primary and backup ports must be connected in a loop.</li> </ul> </li> <li>• Copy mode <ul style="list-style-type: none"> <li>- 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.</li> </ul> </li> <li>• Supports output to be displayed at any position within the control area for each Ethernet port.</li> <li>• 8/10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 240Hz.</li> <li>• Supports both single-mode and multi-mode SFP+ optical modules, with single-mode transmitting up to 20 km and multi-mode up to 300 m.</li> <li>• Comes with 4 single-mode, dual-core optical modules, with a transmission distance of 2 km and a wavelength of 1310 nm. Optical modules of other specifications are optional.</li> </ul>		


## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>• Optional U<sub>4</sub>×10G fiber to 8×5G Ethernet output board, U<sub>4</sub>×5G fiber output board, and U<sub>4</sub>×2.5G fiber output board. Must be used with dedicated fiber optic transceivers and receiving cards.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal fiber connection.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 490 g (17.3 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 23W</li> </ul>		
Load Capacity per Board	Frame Rate (Hz)	Color Depth (bit)	Pixels
	60	8	26.2 million
		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
Details	 <p>2×HDMI 2.0</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Each port supports a maximum video output of 4096×2160@60Hz/8192×1080@60Hz.</li> <li>• Width/height limit: 8192 pixels.</li> <li>• 8/10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 240Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP2.2 and HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 486 g (17.1 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 29W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.1.</li> </ul>	


Name: U_1 × HDMI 2.0 Output Board		Model: U_OUT_1HDMI20
Details	 <p>1 × HDMI 2.0</p> <ul style="list-style-type: none"> <li>• Port 1 is used for video output. Port 1 (COPY) copies the output of Port 1.</li> <li>• Each port supports a maximum video output of 4096 × 2160@60Hz/8192 × 1080@60Hz.</li> <li>• Width/height limit: 8192 pixels.</li> <li>• 8/10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 240Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP2.2 and HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 466 g (16.4 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 27W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.1.</li> </ul>	

Name: U_4×DVI Output Board		Model: U_OUT_4DVI
Details	 <p>4×DVI</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum video output of 2048×1080@60Hz.</li> <li>• Width/height limit: 4096 pixels.</li> <li>• 8-bit output.</li> <li>• Frame rates: 23.98Hz ~ 60Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 506 g (17.8 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 25W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.4.</li> </ul>	

Name: U_4×HDMI 1.4 Output Board		Model: U_OUT_4HDMI14
Details	 <p>4×HDMI 1.4</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum video output of 4096×2160@30Hz/4096×1080@60Hz.</li> </ul>	


## 04 BOARD SPECIFICATIONS

	<ul style="list-style-type: none"> <li>• Width/height limit: 4096 pixels.</li> <li>• 8-bit output.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 476 g (16.8 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 29.3W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.2.</li> </ul>

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"> <li>• Each port supports a maximum video output of 2048×1080@60Hz.</li> <li>• Width/height limit: 4096 pixels.</li> <li>• 8-bit output.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p>	


## 04 BOARD SPECIFICATIONS


	<ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 500 g (17.6 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 29W</li> </ul>
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.3.</li> </ul>

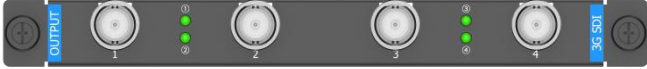
Name: U_8×HDMI 1.3 Output Board		Model: U_OUT_8HDMI13	
Details			
	<p>8×HDMI 1.3</p> <ul style="list-style-type: none"> <li>• Each port supports a maximum video output of 2048×1080@60Hz.</li> <li>• Width/height limit: 4096 pixels.</li> <li>• 8-bit output.</li> <li>• Frame rates: 23.98Hz ~ 120Hz.</li> <li>• Color formats: RGB, YCbCr444, YCbCr422.</li> <li>• Supports HDCP1.4.</li> <li>• Supports embedded audio output.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 500 g (16.8 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 28.7W</li> </ul>		

## 04 BOARD SPECIFICATIONS


Tech Specs	<ul style="list-style-type: none"><li>• For video specifications, refer to Section 5.2.3.</li></ul>
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Name: U_4×HDBaseT 3.0 Output Board		Model: U_OUT_4HDBaseT3	
Details			
	<p>4×HDBaseT 3.0</p> <ul style="list-style-type: none"><li>• Supports 2 operating modes: independent and copy.<ul style="list-style-type: none"><li>- Copy mode: Supports up to 4K60 output. Ports 1 and 2 are used for output, while Ports 3 and 4 copy the outputs of Ports 1 and 2 respectively.</li><li>- Independent mode: Supports up to 4K30 output. Ports 1 to 4 can output independently.</li></ul></li><li>• 8/10-bit output.</li><li>• Supports HDR.</li><li>• Supports HDCP 2.2 and HDCP 1.4.</li><li>• Supports embedded audio output.</li><li>• Supports EDID configuration.</li><li>• Supports a maximum transmission distance of 70 m:<ul style="list-style-type: none"><li>- 4K60: Requires shielded Cat6a cable and shielded RJ45 jacks.</li><li>- 4K30: Requires shielded Cat6 cable and shielded RJ45 jacks.</li></ul></li></ul> <p>Status LEDs (ETH)</p> <ul style="list-style-type: none"><li>• Off: Power supply failure.</li><li>• Solid green: Normal power supply.</li><li>• Blinking orange: Normal data communication.</li></ul> <p>Specifications</p> <ul style="list-style-type: none"><li>• Weight: 500 g (17.6 oz)</li><li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li><li>• Power consumption: 37W</li></ul>		


Name: U_2×12G-SDI Output Board		Model: U_OUT_2×12GSDI
Details	 <p>2× 12G-SDI</p> <ul style="list-style-type: none"> <li>• Backwards compatible with 6G-SDI, 3G-SDI (Level A/B), HD-SDI, and SD-SDI.</li> <li>• Supports SMPTE ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards.</li> <li>• Each port supports a maximum video output of 4096×2160@60Hz.</li> <li>• 10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 60Hz.</li> <li>• Color format: YCbCr422.</li> <li>• Supports interlaced signals: 480i/576i/1080i.</li> </ul> <p>2× 12G-SDI_COPY</p> <ul style="list-style-type: none"> <li>• 2× 12G-SDI copy ports: Ports 1 and 2 are video output ports. Port 1 (COPY) and Port 2 (COPY) copy the outputs of Ports 1 and 2 respectively.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 455 g (16.0 oz)</li> <li>• Dimensions: 193 mm (7.6")×243.2 mm (9.6")×19.82 mm (0.8")</li> <li>• Power consumption: 26W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.5.</li> </ul>	

Name: U_4×3G-SDI Output Board		Model: U_OUT_4x3GSDI
Details	 <p>4 × 3G-SDI</p> <ul style="list-style-type: none"> <li>• Backwards compatible with HD-SDI and SD-SDI.</li> <li>• Supports SMPTE ST-424 (3G), ST-292 (HD), and ST-259 (SD) standards.</li> <li>• Each port supports a maximum video output of 2048 × 1080@60Hz.</li> <li>• Supported formats: Level A and Level B.</li> <li>• 10-bit output.</li> <li>• Frame rates: 23.98Hz ~ 60Hz.</li> <li>• Color format: YCbCr422.</li> <li>• Supports interlaced signals: 480i/576i/1080i.</li> </ul> <p>Status LEDs</p> <ul style="list-style-type: none"> <li>• Off: Power supply failure.</li> <li>• Solid green: Normal power supply.</li> <li>• Blinking green: Normal video output.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 470 g (16.6 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 23W</li> </ul>	
Tech Specs	<ul style="list-style-type: none"> <li>• For video specifications, refer to Section 5.2.6.</li> </ul>	

### 4.3 Preview Board

Name: U_Preview Board		Model: U_PREVIEW_2HDMI20
Details	 <p>2× HDMI 2.0</p> <ul style="list-style-type: none"><li>• Connects to a monitor for input preview and output monitoring.</li><li>• Supports 3840×2160@60Hz and 1920×1080@60Hz.</li><li>• Port 1 defaults to Preview and Port 2 to Program.</li><li>• Supports custom layouts for both Preview and Program, with multiple built-in templates available.</li></ul> <p>Specifications</p> <ul style="list-style-type: none"><li>• Weight: 500 g (17.6 oz)</li><li>• Dimensions: 193 mm (7.6'')×243.2 mm (9.6'')×19.82 mm (0.8'')</li><li>• Power consumption: 25W</li></ul>	

## 4.4 Main Board

Name: U_Main Board		Model: U_MAINBOARD
Details		
	<p>1 × GENLOCK_IN/LOOP</p> <ul style="list-style-type: none"> <li>• 1 × GENLOCK IN, for reference input; 1 × GENLOCK LOOP, for reference loop.</li> <li>• Supports Black burst, Bi-level, and Tri-level signals.</li> </ul> <p>1 × RJ45 1G Ethernet port</p> <ul style="list-style-type: none"> <li>• A communication port for the host, used for connecting to a PC or tablet via a switch or router for device configuration and control.</li> </ul> <p>2 × RJ11</p> <ul style="list-style-type: none"> <li>• RS-232 serial port with a default baud rate of 115200, 8N1. Used for connecting to central controllers or other devices.</li> </ul> <p>2 × USB 2.0</p> <ul style="list-style-type: none"> <li>• Supports firmware upgrades via a USB drive.</li> <li>• Supports data restoration/export via a USB drive.</li> </ul> <p>1 × 3D</p> <ul style="list-style-type: none"> <li>• Works with a 3D emitter and compatible 3D glasses to deliver 3D visual effects.</li> </ul> <p>Specifications</p> <ul style="list-style-type: none"> <li>• Weight: 479 g (16.9 oz)</li> <li>• Dimensions: 193 mm (7.6") × 243.2 mm (9.6") × 19.82 mm (0.8")</li> <li>• Power consumption: 13W</li> </ul>	

# 05 PORT SPECIFICATIONS

## 5.1 Input Ports

### 5.1.1 HDMI 2.0

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096 × 2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50
		8	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422/YCbCr420	8/10	
UHD 3840 × 2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50
		8	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422/YCbCr420	8/10	
QHD 2560 × 1440	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100
		8	23.98,24,25,29.97,30,50,59.94,60,100,
	YCbCr422/YCbCr420	8/10	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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 05 PORT SPECIFICATIONS

### 5.1.2 DP 1.2

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
		8	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8/10	
UHD 3840×2160	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60
		8	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8/10	
QHD 2560×1440	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
		8	23.98,24,25,29.97,30,50,59.94,60,100,
	YCbCr422	8/10	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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 05 PORT SPECIFICATIONS

### 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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

### 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

## 05 PORT SPECIFICATIONS

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

## 05 PORT SPECIFICATIONS

SD-SDI 720×576i 720×480i	YCbCr422	8/10	50,59.94
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### 5.1.7 HDMI 1.3

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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

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### 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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 5.2 Output Ports

### 5.2.1 HDMI 2.0

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096 × 2160	RGB/YCbCr444	10	23.98,24,25,29.97,30
		8	23.98,24,25,29.97,30,50,59.94,60
UHD 3840 × 2160	YCbCr422	8/10	
	RGB/YCbCr444	10	23.98,24,25,29.97,30
8		23.98,24,25,29.97,30,50,59.94,60	
QHD 2560 × 1440	YCbCr422	8/10	
	RGB/YCbCr444	10	23.98,24,25,29.97,30,50,59.94,60,100
8		23.98,24,25,29.97,30,50,59.94,60,100,	
2K 2048 × 1152	YCbCr422	8/10	119.88,120,144
	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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 5.2.2 HDMI 1.4

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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

5.2.3 HDMI 1.3			
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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

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 specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

5.2.5 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



Note: The specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

5.2.6 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



Note: The specifications listed above apply to standard resolutions. For non-standard resolutions, ensure all parameters remain within the interface's bandwidth limitations.

## 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	

## 06 CABINET COUNT LOADED

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	3×1, 1×3
		384*216	5	5×1, 2×2, 1×5
		320*180	8	8×1, 4×2, 3×2, 2×3, 2x4, 1×8
		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	1×1
		384*216	2	2×1, 1×2
		320*180	4	4×1, 2×2, 1×4
		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

## 06 CABINET COUNT LOADED

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

## 06 CABINET COUNT LOADED

		128*128	90	90×1, 45×2, 18×5, 10×9, 9×10, 5×17, 2×43, 1×80...
	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...

## 06 CABINET COUNT LOADED

	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

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Product Properties		
Series	Universe	
Model	U3 Max	
Input Specifications		
Max. input boards	5	
Max. inputs	10 × 4K@60Hz / 40 × 2K@60Hz	
Output Specifications		
Max. output boards	3	
Max. outputs	6 × 4K@60Hz / 24 × 2K@60Hz	
Max. load capacity (LED)	1G Ethernet port	39 million pixels
	5G Ethernet port	70.8 million pixels
	10G fiber port	78 million pixels
Max. video outputs	HDMI 2.0	6
	HDMI 1.4	12
	HDMI 1.3	24
	DVI	12
Number of Layers		
Max. layers	48	
Physical Dimensions (W×H×D)		
Device	482.6mm (19.0") × 133mm (5.2") × 473.5mm (18.6") (excluding rubber feet)	
Packing	630mm (24.8") × 280mm (11.0") × 600mm (23.6")	
Weight		
Net	12kg (26.4lbs)	
Gross	17.95kg (39.57lbs)	

## 07 DEVICE SPECIFICATIONS

Electrical Parameters		
Power supply	AC 100-240V, 50/60Hz, supports dual power supplies (standard).	
Max. power consumption	335.6W	
Operating Environment		
Temperature	-10° C-55° C (14° F-131° 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	U3 Max Video Splicer	1PC
	User Manual	1PC
	After-Sales Service Card	1PC
	Gigabit Ethernet cable	1PC
	Power cord	2PCS (For standard dual power supplies)
	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 INSTALLATION

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### 8.1 Chassis Handling

- Use the front handles when carrying the chassis.
- Lift and place the chassis slightly to prevent damage.

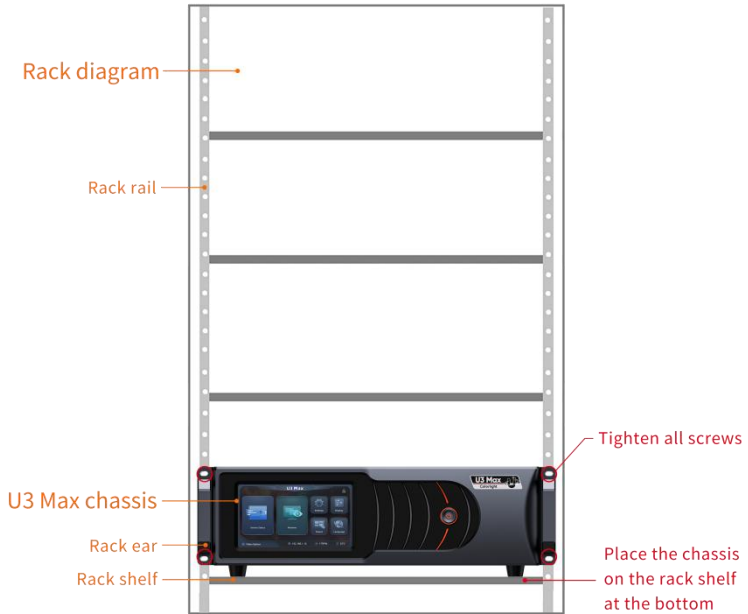


Warning:

Always disconnect power before installation, maintenance, or handling.

## 8.2 Rack Mounting

- Ensure the rack has a support shelf to hold the chassis. (Optional: Remove the four chassis feet for a stable fit if necessary.)
- Secure all rack ears and rails with screws.

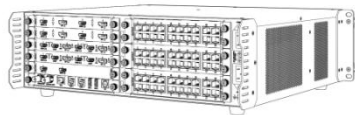
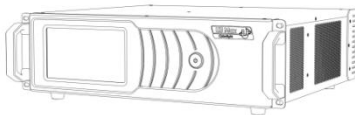
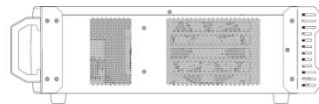
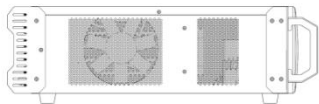
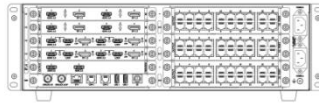
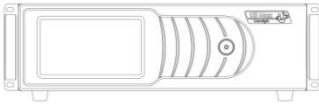
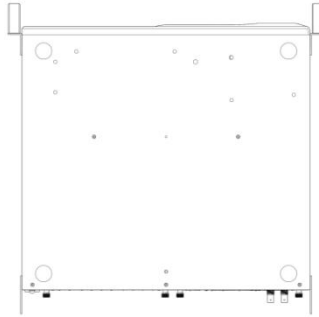


Warning:

Always disconnect power before installation, maintenance, or handling.

## 09 SIX PRINCIPAL VIEWS

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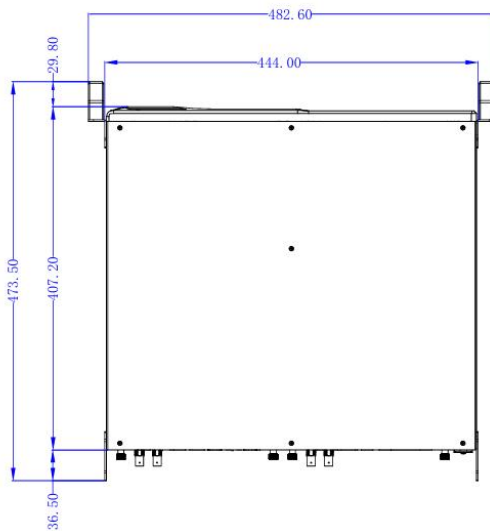
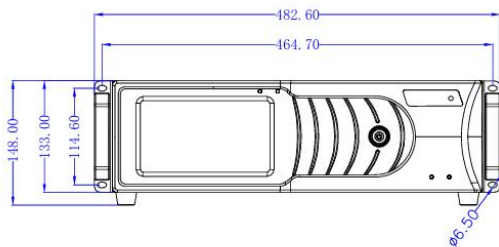


# 10 REFERENCE DIMENSIONS

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Unit: mm

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



# 11 STATEMENTS

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## 11.1 Certifications

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



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.

## 11.2 Legal Statement

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# Colorlight

Official Website



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