Colorlight

X100 Pro-4U

Video Splicer Specification V2.0

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Revision History

Version	Date	Description
V1.0	2023.06.17	• Initial release
V1.3.1	2025.02.17	• New features: - Output port color temperature adjustment - EDID audio switch - Added Limited-to-Full support for 4K input boards (1×HDMI 2.0; 1×DP 1.2; 1×HDMI 2.0+1×DP 1.2) - Added support for mixed PCB board upgrades - Video source redundancy - Auto brightness adjustment via multifunction card - Frame sequential 3D - Web-based mapping - Advanced seam correction - Vertical subtitle - Camera calibration
V2.0	2026.02.09	• New features: - Background image and subtitle transmission acceleration - Signal source redundancy - Simultaneous 4K and 2K outputs - Fan speed control - Web-based shutdown / reboot; upgrade without power cycling - Scheduled preset switching

		- Batch addition of cameras for IP boards - Board temperature monitoring - Optimized Web mapping snapping - Optimized full-screen numbering - Fiber board backup status display - Front panel password lock - Optimized subtitle feature - Web-based receiving card detection - Added mapping mode options for primary/backup fiber ports

01 INTRODUCTION

1.1 Overview

The X100 Pro-4U video splicer is Colorlight's professional solution for video walls, integrating video processing and splicing seamlessly. Built on a high-performance FPGA architecture and a reliable software system, it ensures exceptional processing capability and operational reliability.

Loading up to 26 million pixels, the X100 Pro-4U delivers 4K HDR UHD display with 10-bit video input. Its modular design allows flexible configuration of up to four input boards via HDMI, DP, SDI, DVI, IP, VGA, or CVBS ports, and up to four output boards via Gigabit Ethernet, 10G fiber, HDMI, or DVI ports.

To maximize system stability, it provides fiber and port redundancy, dual power backup, HD preview and monitoring, and intelligent fan speed control. It also supports a variety of video processing functions, including cropping, scaling, and adding background images, subtitles, and logos.

With its robust performance and versatility, the X100 Pro-4U is ideal for fine-pitch LED screens, LCD splicing walls, and projection systems. It is widely used in command and dispatch centers, power system operations, government and corporate conference rooms, data visualization centers, broadcasting studios, and high-end stage rentals.

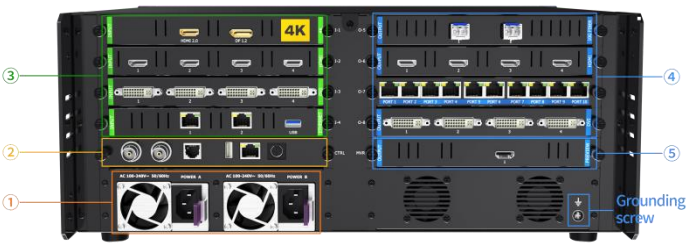
The X100 Pro series supports web control across multiple platforms — Windows, macOS, iOS, Linux, and other compatible systems like UOS, NeoKylin, and Galaxy Kylin. With an intuitive user interface, the series enables smooth workflows including real-time collaboration and modular permission management.

1.2 Appearance

Front Panel

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

Rear Panel



No.	Name	Description
1	Power supply	AC 100-240V, 50/60Hz, supports dual power supplies redundancy (backup power supply optional).
2	Main board	• GENLOCK IN: Sync signal input. • GENLOCK LOOP: Sync signal loop output. • RS-232 serial port • USB 2.0 port • GbE port • 3D port
3	Input board	Supports 10 types of input boards.
4	Output board	Supports 5 types of output boards.
5	Preview board	Displays the preview and monitoring of a single 2K input signal and the device's real-time output (optional board).

Slot Silkscreen Description:

- I-x: for input boards; I stands for Input and x is the slot number.
- O-x: for output boards, O stands for Output and x is the slot number.
- MVR: for preview board.
- CTRL: for main control board.

02 FEATURES

Modular Design Flexible Combination

- Multiple solutions for LED, LCD, and projection screens:
  - 10G fiber output: Loads up to 6.55 million pixels (redundant pixels included) per board and 26 million pixels per device.
  - 1G Ethernet output: Loads up to 6.55 million pixels per board and 26 million pixels per device.
  - HDMI 2.0 output: Loads up to 1×4096×2160@60Hz per board.
  - HDMI 1.3 output: Loads up to 4×1920×1200@60Hz per board.
  - DVI output: Loads up to 4×1920×1200@60Hz per board.
- I/O boards:
  - Input ports:HDMI 2.0, DP 1.2, 12G-SDI, IP, HDMI 1.3, DVI, VGA, CVBS, and 3G-SDI.
  - Output ports: HDMI 2.0, HDMI 1.3, DVI, 10G fiber, and 1G Ethernet.
- IP input board:
  - Supports network video sources and multi-source splicing.
  - H.264 and H.265 decoding.
  - GB28181, ONVIF, and RTSP compliant.
  - HDCP compliant.
- Preview board:
  - 1×HDMI 1.3: For input preview and real-time output monitoring; fixed at 1920×1080@60Hz.
  - Input preview and real-time output monitoring using web application.
- Monitors the status of all boards in real time.
- Input and output frame rates range from 23.98Hz to 240Hz.

Powerful Video Processing

- Up to 16×1080P or 4×4K inputs at the same time.
- Input scaling and cropping.

- Layer roaming and free splicing.
- 3D display.
- Precise color management.
- Multiple color formats: RGB, YCbCr444, YCbCr422.

4K HDR Impeccable Visuals

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

Color Management

- Independent color adjustment of each input source, enabling adjustments to brightness, color temperature, RGB gain, contrast, saturation, and brightness compensation.
- Independent color adjustment of each Ethernet output, enabling adjustments to brightness, color temperature, RGB gain, contrast, saturation, and brightness compensation.
- Independent color adjustment of each video output, enabling adjustments to brightness, color temperature, and RGB gain.
- Brightness adjustment on the level of port group: Manage the display brightness independently by group.

Diversified Display

- BKG: UHD images with a maximum width/height of 32,767 pixels. Background does not use any layers.
- OSD:
  - Scrolling text.
  - Custom direction, speed, and style.

- Signal logo: Supports adding image or text logos for identifying input sources.

Web Control Smart Interaction

- Cross-platform web control that enables multi-user collaboration.
- Input configuration, splicing settings, and device management.
- Screen mapping, screen parameter transmission, and advanced seam correction.
- Control via the Kylin VICP (Visualization Intelligent Control Platform) mobile app.
- Up to 2,000 presets: Real-time application and scheduled switching.

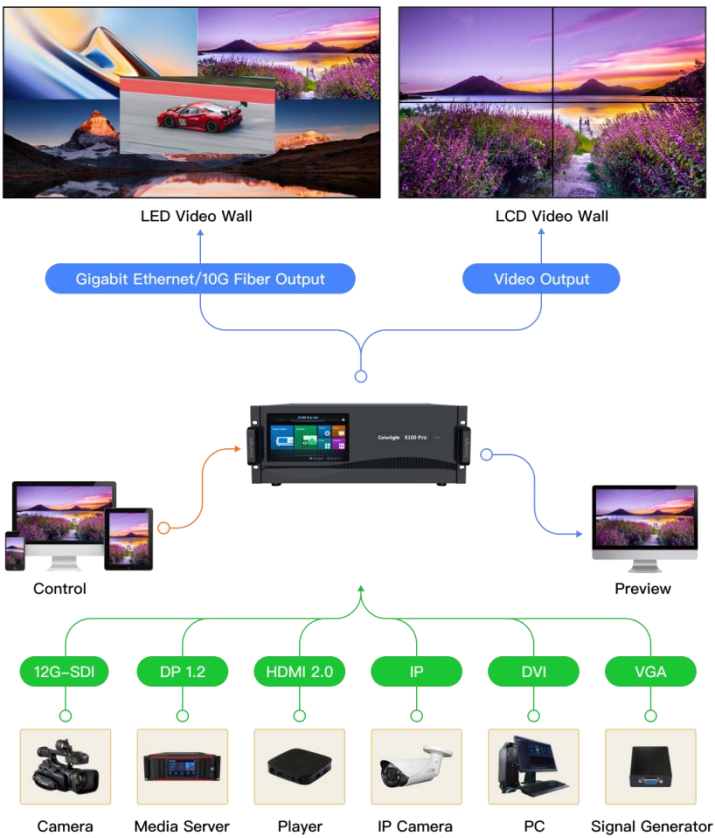
Easy Maintenance

- Upgrades the program and image file via a USB drive or web application.

Secure and Stable

- Dual power supplies(optional) for 24/7 uptime.
- Upgrade without power interruption and automatic startup on power-up.
- Fan speed control.
- Parameter snapshot and redundancies via Ethernet, fiber, and devices.
- Device monitoring: Temperature alerts, disconnection notifications, and more.

03 APPLICATIONS



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

04 BOARD SPECIFICATIONS

4.1 Input Boards

10 types of input boards available for flexible configuration:

Name	Model
1×HDMI 2.0 input board	V4KH1INV5101
1×DP 1.2 input board	V4KD1INV5101
1×HDMI 2.0+1×DP 1.2 input board	V4K2IN1V5101
1×12G-SDI input board	X100IN022
4×HDMI 1.3 input board	X100IN0021
4×DVI input board	X100IN0011
4×VGA input board	X100IN018
2×VGA+2×CVBS input board	X100IN020
4×3G-SDI input board	X100IN004
2×IP input board	VIPX2V2001

Number of input boards per device:

Max. input boards	4	
Name	Max. Input Ports	Max. Load Capacity
1×HDMI 2.0 input board	1	4096×2160@60Hz
1×DP 1.2 input board	1	4096×2160@60Hz
1×HDMI 2.0+1×DP 1.2 input board	2	4096×2160@60Hz
1×12G-SDI input board	1	4096×2160@60Hz
4×HDMI 1.3 input board	4	4×1920×1200@60Hz
4×DVI input board	4	4×1920×1200@60Hz
4×VGA input board	4	4×1920×1200@60Hz
2×VGA+2×CVBS input board	4	2×1920×1200@60Hz
4×3G-SDI input board	4	4×1920×1200@60Hz
2×IP input board	2	8×3840×2160@30fps

Name: 1×HDMI 2.0 Input Board	Model: V4KH1INV5101
Details	 1×HDMI Type A (4K supported) 1×HDMI 2.0 • Backwards compatible with HDMI 1.4/1.3. • Each port supports resolutions up to 4096 × 2160@60Hz or 8192 × 1080@60Hz, and down to 800×600@60Hz, with a maximum pixel clock of 600MHz. • Supports custom resolutions through EDID configuration: - Maximum width: 8192 pixels (8192×1080@60Hz). - Maximum height: 8192 pixels (1024×8192@60Hz). • Width/height limit: 8192 pixels (forced by external signal). • 8/10/12-bit input. • Color formats: RGB, YCbCr444, and YCbCr422. • Frame rates: 23.98Hz ~ 240Hz. • Supports HDR10 and HLG. • Supports HDCP2.2 and HDCP1.4. • Supports embedded audio input. • Progressive only. Specifications • Weight: 280 g (0.62 lbs) • Dimensions: 186.6 mm (7.3'')×23.5 mm (0.9'')×202.5 mm (8.0'') • Power consumption: 4.4W
Tech Specs	• For video specifications, refer to Sections 5.1.1.

Name: 1×DP 1.2 Input Board	Model: V4KD1INV5101
Details	 1×DisplayPort (4K supported) 1×DP 1.2 • Backwards compatible with DP1.1. • Each port supports resolutions up to 4096 × 2160@60Hz or 8192 × 1080@60Hz, and down to 800×600@60Hz, with a maximum pixel clock of 600MHz. • Supports custom resolutions through EDID configuration: - Maximum width: 4096 (4096×2160@60Hz). - Maximum height: 4095 (2160×4095@60Hz). • Width/height limit: 8192 pixels (forced by external signal). • 8/10/12-bit input. • Color formats: RGB, YCbCr444, and YCbCr422. • Frame rates: 23.98Hz ~ 240Hz. • Supports HDR10 and HLG. • Supports HDCP2.2 and HDCP1.4. • Progressive only. Specifications • Weight: 280 g (0.62 lbs) • Dimensions: 186.6 mm (7.3'')×23.5 mm (0.9'')×202.5 mm (8.0'') • Power consumption: 4.4W
Tech Specs	• For video specifications, refer to Sections 5.1.2.

Name: 1×12G-SDI Input Board	Model: X100IN022
Details	 1×12G-SDI (4K supported) 1×12G-SDI • Compatible with 6G-SDI, 3G-SDI(LEVELA/B), HD-SDI, and SD-SDI. • Supports SMPTE-2081-1(12G), ST-2081-1(6G), ST-424(3G), ST-292(HD), and ST - 259(SD). • Each port supports resolutions up to 4096×2160@60Hz. • 8/10-bit input. • Color formats: YCbCr422. • Frame rates: 23.98Hz ~ 60Hz. • Supports signal de-interlacing: 1080i/576i/480i. Specifications • Weight: 299 g (0.66 lbs) • Dimensions: 186.6 mm (7.35'')×23.5 mm (0.93'')× 205.5 mm (8.09'') • Power consumption: 6.1 W
Tech Specs	• For video specifications, refer to Sections 5.1.6.

Name: 1×HDMI 2.0 + 1×DP 1.2 Input Board	Model: V4K2IN1V5101
Details	 1×HDMI Type-A + 1×DisplayPort (select between the two, 4K supported) 1×HDMI 2.0 • Backwards compatible with HDMI 1.4/1.3. • Each port supports resolutions up to 4096 × 2160@60Hz or 8192 × 1080@60Hz, and down to 800×600@60Hz.

	• Supports custom resolutions through EDID configuration: - Maximum width: 4096 pixels (4096×2160@60Hz). - Maximum height: 4095 (2160×4095@60Hz). • Width/height limit: 8192 pixels (forced by external signal). • 8/10/12-bit input. • Color formats: RGB, YCbCr444, and YCbCr422. • Frame rates: 23.98Hz ~ 240Hz. • Supports HDR10 and HLG. • Supports HDCP2.2 and HDCP1.4. • Progressive only. 1×DP 1.2 • Backwards compatible with DP1.1. • Each port supports resolutions up to 4096 × 2160@60Hz or 8192 × 1080@60Hz, and down to 800×600@60Hz, with a maximum pixel clock of 600MHz. • Supports custom resolutions through EDID configuration: - Maximum width: 4096 (4096×2160@60Hz). - Maximum height: 4095 (2160×4095@60Hz). • Width/height limit: 8192 pixels (forced by external signal). • 8/10/12-bit input. • Color formats: RGB, YCbCr444, and YCbCr422. • Frame rates: 23.98Hz ~ 240Hz. • Supports HDR10 and HLG. • Supports HDCP2.2 and HDCP1.4. • Progressive only. Specifications • Weight: 286 g (0.63 lbs) • Dimensions: 186.6 mm (7.3")×23.5 mm (0.9")×202.5 mm (8.0") • Power consumption: 4.9 W
Tech Specs	• For video specifications, refer to Sections 5.1.1 or 5.1.2.

Name: 4×HDMI 1.3 Input Board	Model: X100IN0021
Details	 4×HDMI Type-A (2K supported) 4×HDMI 1.3 • Each port supports resolutions up to 1920×1200@60Hz, and down to 800×600@60Hz, with a maximum pixel clock of 165MHz. • Supports custom resolutions through EDID configuration: - Maximum width: 4096 (4096×512@60Hz). - Maximum height: 4095 (512×4095@60Hz). • Width/height limit: 4096 pixels (forced by external signal). • 8-bit input. • Frame rates: 23.98Hz ~ 240Hz. • Color formats: RGB, YCbCr444, and YCbCr422. • Supports HDCP1.4. • Progressive only. Specifications • Weight: 279 g (0.62 lbs) • Dimensions: 186.6 mm (7.3")×23.5 mm (0.9")×202.5 mm (8.0") • Power consumption: 6.2 W
Tech Specs	• For video specifications, refer to Sections 5.1.3.

Name: 4×DVI Input Board	Model: X100IN0011
Details	 4×SL-DVI-I (2K supported) 4×DVI • Each port supports resolutions up to 1920×1200@60Hz, and down to 800×600@60Hz, with a maximum pixel clock of 165MHz. • Supports custom resolutions through EDID configuration: - Maximum width: 4096 (4096×512@60Hz). - Maximum height: 4095 (512×4095@60Hz). • Width/height limit: 4096 pixels (forced by external signal). • 8-bit input. • Frame rates: 23.98Hz ~ 240Hz. • Color formats: RGB, YCbCr444, and YCbCr422. • Supports HDCP1.4. • Progressive only. Specifications • Weight: 500 g (1.10 lbs) • Dimensions: 186.6 mm (7.3")×23.5 mm (0.9")×202.5 mm (8.0") • Power consumption: 18 W
Tech Specs	• For video specifications, refer to Sections 5.1.4.

Name: 4×VGA Input Board	Model: X100IN018
Details	 4×VGA (2K supported) 4×VGA • Each port supports resolutions up to 1920×1080@60H, and down to 640×480@60Hz. Specifications • Weight: 296 g (0.65 lbs) • Dimensions: 186.6 mm (7.3")×23.5 mm (0.9")×202.5 mm (8.0") • Power consumption: 14.3 W
Tech Specs	• For video specifications, refer to Sections 5.1.5.

Name: 2×VGA + 2×CVBS Input Board	Model: X100IN020
Details	 2×VGA + 2×CVBS 2×VGA • Each port supports resolutions up to 1920×1080@60H, and down to 640×480@60Hz. 2×CVBS • PAL/NTSC compliant. Specifications • Weight: 311 g (0.69 lbs) • Dimensions: 186.6 mm (7.35'')×23.5 mm (0.93'')×209 mm (8.23'') • Power consumption: 14.3 W
Tech Specs	• For video specifications, refer to Sections 5.1.5.

Name: 4×3G-SDI Input Board	Model: X100IN004
Details	 4×3G-SDI (2K supported) 4×3G-SDI • Compatible with 3G-SDI(LEVELA/B), HD-SDI and SD-SDI. • Supports ST-424 (3G), ST-292 (HD), and ST-259 (SD) video inputs. • Each port supports resolutions up to 1920×1080@60Hz. • 8/10-bit input. • Color format: YCbCr422. • Frame rates: 23.98Hz ~ 60Hz. • Supports signal de-interlacing: 1080i/576i/480i. Specifications • Weight: 372 g (0.82 lbs) • Dimensions: 186.6 mm (7.35'')×23.5 mm (0.93'')×209 mm (8.23'') • Power consumption: 8.3 W
Tech Specs	• For video specifications, refer to Sections 5.1.7.

Name: 2×IP Input Board	Model: VIPX2V2001
Details	 2×RJ45 + 1×USB 3.0 2×RJ45 GbE ports • Supports independent connection to network video sources and redundancy. • Supports H.264 (AVC) and H.265 (HEVC) video encoding standards. • Supported protocols: GB28181 and ONVIF. • Supports RTSP protocol. • Decoding capacity per board: - 8×3840×2160@30Hz. - 18×2560×1440@30Hz. - 32×1920×1080@30Hz. - 64×720×576@30Hz • Supports DHCP. 1×USB 3.0 • Supports firmware upgrades via a USB drive. Specifications • Weight: 325 g (0.72 lbs) • Dimensions: 186.6 mm (7.35'')×23.5 mm (0.93'')×202.5 mm (7.97'') • Power consumption: 8 W

4.2 Output Boards

5 types of output boards available for flexible configuration:

Name	Model
10×1G Ethernet output board	X100OUT04
2×fiber output board	X100OUT05
1×HDMI 2.0 output board	X100OUT18
4×HDMI 1.3 output board	X100OUT02
4×DVI output board	X100OUT01

Number of output boards per device:

Max. output boards	4	
Name	Max. output ports	Max. load capacity
10×1G Ethernet output board	10	6.55 million
2×fiber output board	2	6.55 million (redundancy included)
1×HDMI 2.0 output board	1	4096×2160@60Hz
4×HDMI 1.3 output board	4	4×1920×1200@60Hz
4×DVI output board	4	4×1920×1200@60Hz

Name: 10×1G Output Board	Model: X100OUT04

Details

This LED sending board loads up to 6.55 million pixels, with a maximum width and height of 32767 pixels.

10×RJ45 1G Ethernet ports

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

Status LEDs

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

Specifications

- Weight: 306 g (0.67 lbs)
- Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″)
- Power consumption: 9 W

	Frame Rate (Hz)	Color Depth (bit)	Pixels
Load Capacity per Board	60	8	6.55 million
		10	4.91 million
	120	8	3.27 million
		10	2.45 million
	240	8	1.63 million
		10	1.22 million
Load Capacity per Port	60	8	0.65 million
		10	0.49 million
	120	8	0.32 million
		10	0.24 million
	240	8	0.16 million
		10	0.12 million

Name: 2×Fiber Output Board	Model: X100OUT05

Details

This LED sending board loads up to 6.55 million pixels, with a maximum width and height of 32767 pixels. (Used with a fiber optic transceiver.)

2×10G fiber（1 primary + 1 backup）

- Automatic backup: Port 1 operates independently, while port 2 automatically backs up the data from port 1.
- Supports converting port 1 into ten 1G Ethernet ports via a fiber optic transceiver.
- The output image of each port can be set freely within the device control range.
- 8/10-bit output.
- Frame rates: 23.98Hz ~ 240Hz.
- Supports both single-mode and multi-mode SFP+ optical modules, with single-mode transmitting up to 10 km.
- The optical module must support the SFP+ form factor.
- Comes with 2 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.

Specifications

- Weight: 325 g (0.72 lbs)
- Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″)
- Power consumption: 5.7 W

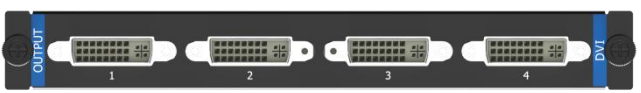
Load Capacity per Board

Frame Rate (Hz)	Color Depth (bit)	Pixels
60	8	6.55 million
	10	4.91 million
120	8	3.27 million
	10	2.45 million
240	8	1.63 million
	10	1.22 million

Name: 1×HDMI 2.0 Output Board	Model: X100OUT18
Details	 1×HDMI 2.0 (4K@60Hz) 1×HDMI 2.0 • Each port supports resolutions up to 4096×2160@60Hz, and down to 800×600@60Hz. • Supports custom resolutions: - Maximum width: 8192 (8192×1080@60Hz). - Maximum height: 8188 (1024×8188@60Hz). • 8/10-bit output. • Frame rates: 23.98Hz ~ 144Hz. • Color formats: RGB. Specifications • Weight: 278 g (0.61 lbs) • Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″) • Power consumption: 4.7 W
Tech Specs	• For video specifications, refer to Sections 5.2.1.

Name: 4×HDMI 1.3 Output Board	Model: X100OUT02
Details	 4×HDMI 1.3 (2K@60Hz) 4×HDMI 1.3 • Each port supports resolutions up to 1920×1200@60Hz, and down to 800×600@60Hz • Supports custom resolutions: - Maximum width: 8192 (8192×1080@60Hz).

	- Maximum height: 8188 (1024×8188@60Hz). • Frame rates: 23.98Hz ~ 144Hz. • Color formats: RGB. Specifications • Weight: 285 g (0.63 lbs) • Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″) • Power consumption: 3.8 W
Tech Specs	• For video specifications, refer to Sections 5.2.2.

Name: 4×DVI Output Board	Model: X100OUT01
Details	 4×DVI (2K@60Hz) 4×DVI • Each port supports resolutions up to 1920×1200@60Hz, and down to 800×600@60Hz • Supports custom resolutions: - Maximum width: 4096 (4096×512@60Hz). - Maximum width: 4096 (512×4096@60Hz). • Frame rates: 23.98Hz ~ 144Hz. • Color formats: RGB. Specifications • Weight: 282 g (0.62 lbs) • Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″) • Power consumption: 3.7 W
Tech Specs	• For video specifications, refer to Sections 5.2.3.

4.3 Preview Board

Name: Preview Board	Model: X100PV3101
Details	 1×HDMI 1.3 • Connects to monitors for input preview and output monitoring. • The preview and monitoring images can be viewed via front panel HD screen or the Web application. • Fixed output resolution: 1920×1080@60Hz. Specifications • Weight: 390 g (0.86 lbs) • Dimensions: 186.6 mm (7.3″)×23.5 mm (0.9″)×202.5 mm (8.0″) • Power consumption: 24 W

4.4 Main Board

Name: Main Board	
Details	 1×GENLOCK IN+1×GENLOCK LOOP • 1 × GENLOCK IN for reference input; 1 × GENLOCK LOOP for reference loop-out. • Supports Black Burst, Bi-level, and Tri-level signals. 1×RJ11（RS-232） • RS-232 serial port with a default baud rate of 115200, 8N1. Used for connecting to central controllers or other devices. 1×USB 2.0 • Supports firmware upgrades via a USB drive. 1×RJ45 Gigabit Ethernet port • A communication port for the host, used for connecting to a PC or tablet via a switch or router for device configuration and control. 1×3D（VESA） • Works with a 3D emitter and compatible 3D glasses (optional).

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	12	23.98,24,25,29.97,30
		10	23.98,24,25,29.97,30,50
		8	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8/10/12	
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	12	23.98,24,25,29.97,30,50,59.94,60
		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, 119.88,120,144
	YCbCr422	8/10	
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/YCbCr420	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
FHD 1920×1080	RGB/YCbCr444	12	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
	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

5.1.2 DP 1.2

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB/YCbCr444	12	23.98,24,25,29.97,30
		8/10	23.98,24,25,29.97,30,50,59.94,60
	YCbCr422	8/10/12	
UHD 3840×2160	RGB/YCbCr444/ YCbCr422	8/10	23.98,24,25,29.97,30,50,59.94,60
QHD 2560×1440	RGB/YCbCr444	12	23.98,24,25,29.97,30
		8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
	YCbCr422	8/10	
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	12	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120
	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 HDMI 1.3

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
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.

5.1.4 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 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.

5.1.6 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.

5.1.7 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.

5.2 Output Ports

5.2.1 HDMI 2.0			
Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
DCI4K 4096×2160	RGB	10	23.98,24,25,29.97,30
		8	23.98,24,25,29.97,30,50,59.94,60
UHD 3840×2160	RGB	10	23.98,24,25,29.97,30
		8	23.98,24,25,29.97,30,50,59.94,60
QHD 2560×1440	RGB	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, 119.88,120
2K 2048×1152	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
WUXGA 1920×1200	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
FHD 1920×1080	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
UXGA 1600×1200	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SXGA 1280×1024	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
HD 1280×720	RGB	8/10	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144

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 1.3

Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
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

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 DVI			
Resolution	Color Format	Color Depth (bit)	Frame Rate (Hz)
2K 2048×1152	RGB	8	23.98,24,25,29.97,30,50,59.94,60
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	23.98,24,25,29.97,30,50,59.94,60,100
HD 1280×720	RGB	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
XGA 1024×768	RGB	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144
SVGA 800×600	RGB	8	23.98,24,25,29.97,30,50,59.94,60,100, 119.88,120,144

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	11×1, 5×2, 3×3, 2×5, 1×11
		256*512	5	5×1, 2×2, 1×4
		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, 1×8

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, 2×4, 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

Note: The specifications above apply to standard cabinets. For details on other cabinets, consult technical support.

07 DEVICE SPECIFICATIONS

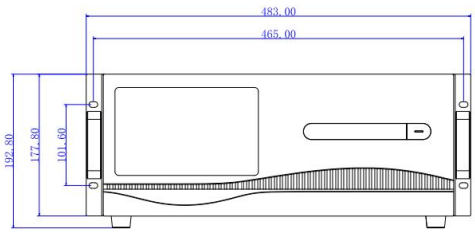
Product Information		
Series	X100 Pro	
Model	X100 Pro-4U	
Input Specifications		
Max. input boards	4	
Max. inputs	4×4K@60Hz / 16×2K@60Hz	
Output Specifications		
Max. output boards	4	
Max. outputs	4×4K@60Hz / 16×2K@60Hz	
Max. load for LED screens	1G Ethernet port	26 million
	10G fiber port	26 million pixels (redundant pixels included)
Number of Layers		
Max. layers	32	
Physical Dimensions (W×H×D)		
Device	483.0mm(19.0")×177.8mm(7.0")×406.1mm(16.0") (Rubber feet excluded)	
Packaging	555.0mm(21.9")×295.0mm(11.6")×476.0mm(18.7")	
Weight		
Net	11.55 kg (25.46 lbs)	
Gross	14.55 kg (32.08 lbs)	
Electrical Parameters		
Power input	AC 100-240V, 50/60Hz; Supports 2 power supplies (backup optional)	
Max. power consumption	120W	

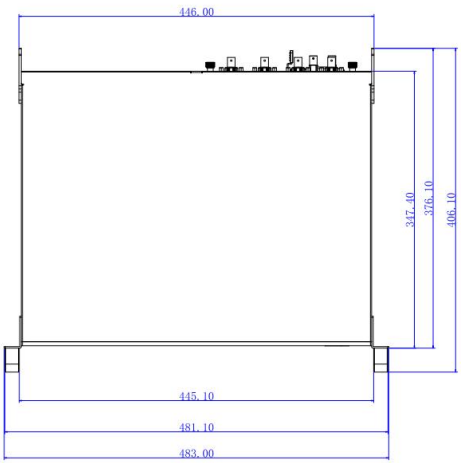
Operating Environment		
Temperature	10℃~45℃ (50° F~113° F)	
Humidity	0%RH-85%RH, non-condensing	
Storage Environment		
Temperature	-10℃~60℃ (14° F~140° F)	
Humidity	0%RH-95%RH, non-condensing	
Placement Requirement		
This device can only be placed horizontally. Do not invert the device or place it vertically.		
Noise level (typical at 25℃/77° F)		＜ 45 dB(A)
Packing List	X100 Pro-4U Video Splicer	1PC
	Certificate	1PC
	Warranty Card	1PC
	User Manual	1PC
	Gigabit Ethernet Cable	1PC/2PCS (Optional boards include additional cables)
	Power Cord	1PC/2PCS (Optional power supplies include additional cords)
	Grounding Cable	1PC
	HDMI Cable	1PC (Optional boards include additional cables)
	DP Cable	1PC (Optional boards include additional cables)
	DVI Cable	1PC (Optional boards include additional cables)

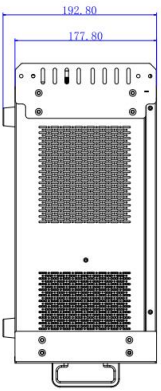
08 REFERENCE DIMENSIONS

Unit: mm

Tolerance: ±0.2mm







09 STATEMENT

9.1 Certifications

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

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.

9.2 Legal Statement

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Colorlight

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