PIXELHUE

Q8

Seamless Switcher

Specifications

Change History

Document Version	Release Date	Description
V2.0.0	2026-04-17	• Added the VPU feature. • Added the Q8_1xST2110(100G)+4x12G-SDI Output Card. • Updated the gross weight and packing information.
V1.9.0	2026-01-26	• Updated the video source specifications. • Updated the rear panel diagrams. • Added the Q8_ST2110 (100G)+HDMI2.1+DP1.4 Input Card.
V1.8.0	2025-10-31	• Updated the product features. • Updated the front and rear panel diagrams. • Updated description of the Link port on the front panel. • Updated description of rear panel connectors. • Updated the product specifications
V1.7.1	2025-09-25	• Updated the product features. • Added the Q8_8xHDMI2.0+12G-SDI Input Card.
V1.7.0	2025-08-20	• Updated the product features. • Updated the front panel diagram.

Introduction

PIXELHUE's Q8 is a seamless switcher that operates at a full 4K standard and supports 8K video processing. It adopts a modular design with a plug-in structure and allows users to flexibly configure input and output cards according to their needs, accommodating various live video inputs with stable performance. Working with the professional intelligent management software PixelFlow and the event controller U5 or U5 Pro, it can easily achieve a wide array of visual effects. Thank to that, the Q8 can be employed in various settings, including stage performances, high-end auto shows, business conferences, television production, product launches, and large exhibitions.

The Q8 is built on a powerful hardware FPGA system architecture with a modular design, combining the stability and efficiency of a purely hardware-based approach with flexible input and output card configurations. It supports full 4K ultra-high-definition video inputs and outputs, multi-screen and multi-layer management, irregular screen loading, edge blending, input EDID management and output timing management, as well as image monitoring and input view. This provides a rich visual construction experience.

Certifications

CE, FCC, IC, RoHS

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact PIXELHUE to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or PIXELHUE has the right to claim compensation.

Features

Plug-in Structure for Flexible Card Configuration

- The input and output cards feature a modular design with a plug-in structure, enabling users to freely choose and combine various input and output cards
- Ability to monitor input and output connection status in real-time
- Ability to monitor board working status and key chip temperatures
- Input source cropping
- Advanced DSK capability for input: smart key, luma key and chroma key
- Output color gamut adjustment
- 90° output rotation for creative display
- Automatic HDCP decryption for inputs and HDCP encryption for outputs
- Optical port backup and long-distance transmission via optical ports
- 3 EDID setting modes
  - Preset EDID
  - Custom EDID with support for reduced blanking and HBlank settings
  - Advanced EDID settings by configuring video source timing parameters
- Support for multiple standard timings such as CEA, DMT, and SMPTE
- Sync signal information at a glance

  Display the current synchronization signal and its frame rate, along with the synchronization status. If synchronization fails, users can check the reason for the failure.
- Various control options:
  - Front panel LCD
  - Event controller U5/U5 Pro
  - Event management software PixelFlow, controlling a single or multiple devices simultaneously
  - Third-party control system Stream Deck (Companion integrated into the Q8)
- Compatible with EDID on Mac and support for Mac mosaic
- Audio matrix

  Manage and map input and output audios.
- Two devices on the same local network can establish a link relationship, enabling input source sharing via the devices' Link port.

Multi-Screen and Multi-Layer for Centralized Management

- Intelligent 4K@60Hz image processing

  Leveraging industry-leading seamless scaling algorithms and 4:4:4 video processing technology, the product faithfully restores image colors and retains intricate details. Even when videos are scaled down, the image boundaries remain sharp and natural, and the texture depth is consistently maintained, delivering a clearer and more authentic viewing experience for viewers.

- Multi-screen control
  - Each connector of the output card supports different resolution settings.
  - Each connector can create a screen with a unique resolution, allowing a single switcher to load multiple large screens with different resolutions.
  - Multiple output connectors support splicing for uneven screen division, with each connector driving a section of the screen with varying resolutions.
  - Virtual pixel configuration is supported, simplifying calculations between on-site screen size and Q8-loaded screen pixels.
- Synchronized output connector splicing

  With the help of frame synchronization, the output images on all the connectors are completely synchronized. This enables the output to deliver smooth playback and perfect image without issues such as picture stutter, frame loss, image tearing, and noticeable cut lines.

- Multi-layer
  - A single output card supports up to 8x 4K layers.
  - Each layer's position and size can be freely adjusted, with options for setting borders and shadows.
  - Layer copying and flipping are supported.
  - Irregular layers are supported.
  - Layer resource management enables viewing of remaining available layers.
- Output image quality enhancement

  Inputs, outputs, and layers can be adjusted for image quality, with available settings for brightness, contrast, saturation, hue, and gamma.

- BKG settings
  - Local images and images captured from input sources and PGM can be used as BKG images.
  - The BKG storage capacity is up to 1 GB, with no resolution limit for a single BKG image.
  - The BKG image fills the whole screen at the bottom automatically by default.
  - The BKG position and size are adjustable.
- 1024 presets, flexible saving and recall
  - Up to 1024 complete and relative presets can be saved from PVW or PGM.
  - Presets can be loaded to PVW or PGM.
  - Preset names can be modified and overwritten.

  - Custom layouts, sizes, and positions of layers with different signals on the screen can be saved as presets.
  - Different complete and relative presets can be recalled instantly to change the display content or layout, meeting diverse application needs.
- Preview video signals, layer images and layout for easy operation control and send PVW to PGM with effects to deliver professional-quality presentations
  - TAKE: Send PVW to PGM with an effect and adjustable effect duration.
  - T-bar: Manually control the fade effect speed.
  - CUT: Send PVW to PGM directly without effect.
- Layer preset

  Save layer properties and apply them to other layers for quick configuration.
- KeyFrame

  Only layer position and size can be adjusted for now (Additional functionalities will be implemented in future updates.)
- Quick switching of screen frame rates

  Change the frame rates for all output connectors on the screen in one batch.
- Individual brightness and contrast adjustment for RGB

  Adjust brightness and contrast individually for R, G, and B components, offering more flexible image quality adjustments.
- HDR format conversion

  Convert input sources to SDR, HDR10, or HLG formats.
- 3D

  Recognize and output 3D video content accurately, convert between 2D and 3D formats, and blend 3D and 2D videos for display to provide an immersive visual experience.
- Cut & Fill

  Use the original layer as a Fill layer and overlap it with the Cut layer to display the visible image of the Cut layer, allowing users to define output shapes and effects more flexibly.
- Edge blending

  Blend the overlapping edges of the images projected by multiple projectors to ensure uniform brightness across the entire display.
- LCD bezel compensation

  Eliminate the visual disruption caused by seams in spliced LCD displays, resulting in a more unified and seamless display.
- VPU

  Enable sharing and scheduling of layer resources between adjacent output cards, allowing output cards with surplus resources to lend to a single adjacent card in need. This expands available layer resources without altering hardware configuration, enhancing project configuration efficiency in complex editing scenarios.

Multiple Design Features for Stable Operation

- Device backup

  With device backup enabled, when a layer's input source is missing or has no signal, all output connectors for the screen immediately stop signal output, initiating a switch to the backup channel through coordination with the sending and receiving cards.

- Input source hot backup

  You can establish hot backup settings for input sources. If the primary source loses its signal, the system automatically switches to the backup. You can also manually switch to the backup whenever necessary.

- 2+1 power supply backup to ensure the system stability
- Monitor all input sources, PVW, and PGM, with support for custom MVR layouts.
- Data backup and recovery

  Once device configuration is complete, project files can be saved locally. In case of data loss or the need for reconfiguration, these files can be used for quick restoration.

- Device diagnostics
- Automated system monitoring and alarm

  Hardware monitoring capabilities encompass fan speed, module temperatures, voltage levels, and operational status.

- The system has passed 24/7 stability tests and is proven to be stable and reliable

Video Source Specifications

Input	Bit Depth	Sampling Format	Supported Resolutions	Connector Bandwidth
HDMI 2.0	8bit	RGB 4:4:4	4096×2160@60Hz 8192×1080@60Hz	18 Gbps
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:4:4		
		YCbCr 4:2:2	4096×2160@60Hz	
	12bit	RGB 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:4:4		
		YCbCr 4:2:2	4096×2160@60Hz	
HDMI 2.1	8bit	RGB 4:4:4	4096×2160@60Hz 8192×1080@60Hz	18 Gbps
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:4:4		
		YCbCr 4:2:2	4096×2160@60Hz	

	12bit	RGB 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:4:4		
		YCbCr 4:2:2	4096×2160@60Hz	
DP 1.2	8bit	RGB 4:4:4	8192×1080@60Hz 4096×2160@30Hz 3840×2160@60Hz	21.6 Gbps
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	12bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		
DP 1.4	8bit	RGB 4:4:4	8192×1080@60Hz 4096×2160@30Hz 3840×2160@60Hz	21.6 Gbps
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	12bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		
12G-SDI	8bit	YCbCr 4:2:2	4096×2160@60Hz	11.88 Gbps
	10bit	YCbCr 4:2:2		
	12bit	YCbCr 4:2:2		
25G OPT	8bit	RGB 4:4:4	4096×2160@60Hz	25 Gbps
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		
100G OPT	8bit	RGB 4:4:4	4x 4096×2160@60Hz	100 Gbps (4x 25 Gbps)
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10bit	RGB 4:4:4		
		YCbCr 4:4:4		
		YCbCr 4:2:2		

Note

In the current version, the DP 1.4 and HDMI 2.1 connector specifications are limited to 4K×2K@60Hz. Once the device supports 8K layers in the future, the specifications will be expanded to 8K×4K@30Hz.

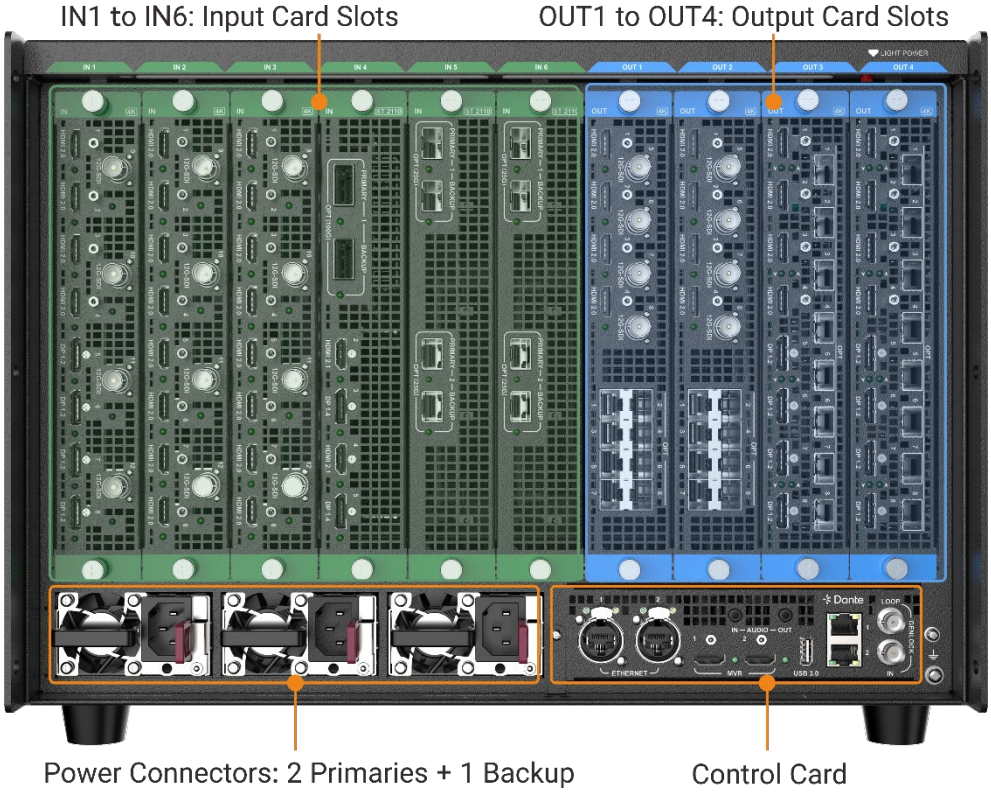
Appearance

Front Panel

No.	Type	Description
1	Power button	• Power on: Press the button to turn on the device. • Power off: Press the button, and a shutdown prompt window appears on the LCD screen. Tap **Yes** to shut down the device.
2	LED strip	Indicate the device running status. • Blue: The device is operating normally. The strip supports breathing and flashing effects. • Off: The device is either not powered or is malfunctioning.
3	LCD screen	A 7” screen displaying the device status, menus, submenus and messages for parameter settings.
4	USB 3.0	1x USB 3.0 (Type-A) port • Update device firmware via USB drive. • Export logs, and import and export projects.

No.	Type	Description
5	LINK port	Link two Q8 units for cascading and control. • 8x QSFP ports – They enable the sharing of input sources between two devices. – Each port can share up to two 4K input sources, allowing up to 16 4K input sources to be shared across all eight ports. • 1x LINK IN It accepts the synchronization control signal in scenarios where a single event controller or control software controls multiple switchers. • 1x LINK OUT It loops the synchronization control signal in scenarios where a single event controller or control software controls multiple switchers. • 1x OPT, 10 optical port (reversed) Note: The LINK IN and LINK OUT ports are designed to enable control cascading among switchers in scenarios where they are controlled by a single event controller or control software. In these scenarios, one switcher should be set as the master and the others as slaves. By connecting the LINK IN and LINK OUT ports among the switchers using Ethernet cables, control commands can be synchronized effectively.
6	LINK port cover	Cover the LINK ports.

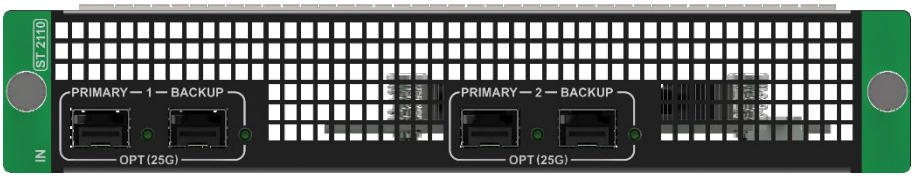
Rear Panel (Fully Loaded)

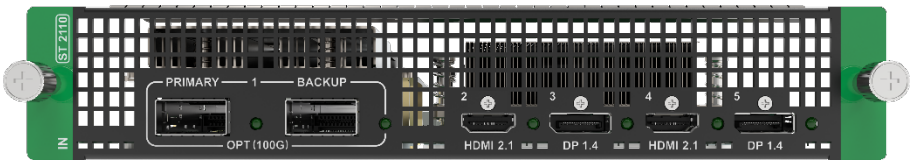


Note

- The picture above is the rear panel of the device when it is fully loaded. Users can configure input and output cards as needed.
- The input and output cards are replaceable. Up to 6 input cards and 4 output cards can be installed.

Input Card	
Q8_HDMI2.0+DP1.2+12G-SDI Input Card	 • 8x 4K×2K@60Hz concurrent inputs per input card • Deinterlacing for up to 4 inputs per input card • Providing up to 4 sync sources per input card **4x HDMI 2.0** • Up to 4K×2K@60Hz 8bit 4:4:4, 4K×2K@60Hz 12bit 4:2:2, or 4K×2K@60Hz 12bit 4:2:0 • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:0, 4:2:2 and 4:4:4 inputs • Support for processing of Full and Limited range videos • Support for HDR and 3D inputs • HDCP 1.4 and HDCP 2.2 compliant • Support for deinterlacing processing • Support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels **4x DP 1.2** • Up to 4K×2K@60Hz 10bit 4:4:4 or 4K×2K@60Hz 12bit 4:2:2 • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:2 and 4:4:4 inputs • Support for processing of Full and Limited range videos • Support for HDR and 3D inputs • HDCP 1.3 and HDCP 2.2 compliant • No support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels **4x 12G-SDI** • Support for ST-2082 (12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs • Compatible with SD-SDI, HD-SDI, 3G-SDI and 6G-SDI • Support for interlaced video signal

	• No support for EDID management or bit depth settings • Support for 8-channel embedded audio (24bit/48kHz) **Status LEDs** Each input connector has a status LED which indicates source access status. • On: The source is accessed. • Off: The source is not accessed or it is abnormal.
Q8_ST2110_4x SFP25G Input Card_I	 • 25G OPT for video source transmission, control, and synchronous clock input. • The video interface and control interface are combined into one. • Simultaneous input of primary and backup video sources, enabling seamless transition when necessary. **4x 25G OPT** • 2 primaries and 2 backups per input card • Up to 4K×2K@60Hz 12bit 4:4:4 • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:2 and 4:4:4 inputs • Standard: Support SMPTE ST 2110 (-10, -20) and SMPTE 2059 (-1, -2). • Backup: Support the SMPTE 2022-7 standard. • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels • PixelFlow control: Support loading video stream configuration by SDP file or directly inputting. Support setting the resolution when managing ST 2110 source in PixelFlow. – Support standard resolutions up to 4096×2160@60Hz. – Allow for custom input resolutions. • Color gamut: Rec.601/Rec.709/Rec.2020/DCI-P3 • PTP settings: Support the IEEE 1588-2008 standard, enabling high-precision synchronization across different input sources when Lock Input to PTP is activated. • IP address: IPv4 DHCP and static IP • Ethernet: – 25 GbE IEEE 802.3cc (25GBASE-LR) – 25 GbE IEEE 802.3by (25GBASE-SR) • Port configuration You can configure the port information through the following two methods: – Import the SDP file in PixelFlow for configuration. – Directly input the video stream configuration in PixelFlow: Video stream destination IP (primary/backup), port (primary/backup), video source IP (primary/backup), and video source details (resolution, frame rate, color/sample, bit depth)

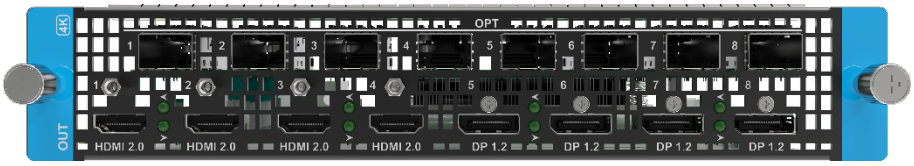
Q8_ST2110 (100G)+HDMI2.1+ DP1.4 Input Card	 • 100G OPT for video source transmission, control, and synchronous clock input. • The video interface and control interface are combined into one. • Simultaneous input of primary and backup video sources, enabling seamless transition when necessary. **2x 100G OPT** • 1 primary and 1 backup per input card • Up to 4x 4K×2K@60Hz 12bit 4:4:4 • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:2 and 4:4:4 inputs • Standard: Support SMPTE ST 2110 (-10, -20) and SMPTE 2059 (-1, -2). • Backup: Support the SMPTE 2022-7 standard. • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels • PixelFlow control: Support loading video stream configuration by SDP file or directly inputting. Exporting SDP file is also supported. Support setting the resolution when managing ST 2110 source in PixelFlow. – Support standard resolutions up to 4096×2160@60Hz. – Allow for custom input resolutions. • Color gamut: Rec.601/Rec.709/Rec.2020/DCI-P3 • PTP settings: Support the IEEE 1588-2008 standard, enabling high-precision synchronization across different input sources when Lock Input to PTP is activated. • FEC configuration: With parameters set at the card level, this feature can automatically detect and correct errors during data transmission, enhancing the reliability of video signal transfer. Support RS-FEC and NO-FEC encoding methods. This feature requires configuration on the switch before it can be used. • IP address: IPv4 DHCP and static IP • Multicast protocol: IGMPv3 • Ethernet: – 100 GbE IEEE 802.3ba (100GBASE-LR) – 100 GbE IEEE 802.3ba (100GBASE-SR) – 100 GbE IEEE 802.3ba (100GBASE-CR) • Port configuration You can configure the port information through the following two methods: – Import the SDP file in PixelFlow for configuration. – Directly input the video stream configuration in PixelFlow: Video stream destination IP (primary/backup), port (primary/backup), video source IP (primary/backup), and video source details (resolution, frame rate, color/sample, bit depth)

	2x HDMI 2.1 • One HDMI 2.1 and one DP 1.4 form a group, with only one usable at a time • Up to 8K×4K@30Hz 10bit 4:4:4 (Currently limited to 4K×2K@60Hz 8bit 4:4:4) • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:0, 4:2:2 and 4:4:4 inputs • Support for processing of Full and Limited range videos • Support for HDR and 3D inputs • HDCP 1.4 and HDCP 2.3 compliant • Support for deinterlacing processing • Support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels **2x DP 1.4** • One HDMI 2.1 and one DP 1.4 form a group, with only one usable at a time • Up to 8K×4K@30Hz 10bit 4:4:4 (Currently limited to 4K×2K@60Hz 10bit 4:4:4) • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:2 and 4:4:4 inputs • Support for processing of Full and Limited range videos • Support for HDR and 3D inputs • HDCP 1.3 and HDCP 2.3 compliant • No support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels **Status LEDs** Each input connector has a status LED which indicates source access status. • On: The source is accessed. • Off: The source is not accessed or it is abnormal.
Q8_8xHDMI2.0+ 12G-SDI Input Card	 • 8x 4K×2K@60Hz concurrent inputs per input card **8x HDMI 2.0** • Up to 4K×2K@60Hz 8bit 4:4:4, or 4K×2K@60Hz 10bit 4:2:2 • Support for processing of 8-bit, 10-bit and 12-bit inputs • Support for 4:2:0, 4:2:2 and 4:4:4 inputs • Support for processing of Full and Limited range videos • Support for HDR inputs

	• HDCP 1.4 and HDCP 2.2 compliant
	• Support for deinterlacing processing
	• Support for interlaced video signal
	• Support for 8-channel embedded audio (24bit/48kHz)
	• Custom resolutions
	  – Maximum width: 8192 pixels
	  – Maximum height: 7680 pixels
	4x 12G-SDI
	• Support for ST-2082 (12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs
	• Compatible with SD-SDI, HD-SDI, 3G-SDI and 6G-SDI
	• Support for interlaced video signal
	• No support for EDID management or bit depth settings
	• Support for 8-channel embedded audio (24bit/48kHz)
	Status LEDs
	Each input connector has a status LED which indicates source access status.
	• On: The source is accessed.
	• Off: The source is not accessed or it is abnormal.

Output Card	

Q8_HDMI2.0+12G-SDI+Fiber Output Card	
	The 4x HDMI 2.0 and 4x 12G-SDI connectors are divided into 4 groups. Each group includes 1x HDMI 2.0 and 1x 12G-SDI, and connectors within the same group copy each other's output. The 12G-SDI connector supports only standard resolutions under the protocol. When the HDMI 2.0 connector is set to a custom resolution, the 12G-SDI connector does not output.
	• Connector 1 (HDMI 2.0) and connector 5 (12G-SDI) form Group 1.
	• Connector 2 (HDMI 2.0) and connector 6 (12G-SDI) form Group 2.
	• Connector 3 (HDMI 2.0) and connector 7 (12G-SDI) form Group 3.
	• Connector 4 (HDMI 2.0) and connector 8 (12G-SDI) form Group 4.
	4x HDMI 2.0
	• Up to 4K×2K@60Hz 8bit 4:4:4, or 4K×2K@60Hz 12bit 4:2:2 output
	• Support for 8-bit, 10-bit and 12-bit output settings
	• Support for 4:2:2 and 4:4:4 output settings
	• Support for YCbCr and RGB color space settings
	• Support for HDR outputs
	• Support for color gamut adjustment
	• Support for interlaced video signal
	• Support for 8-channel embedded audio (24bit/48kHz)
	• Custom resolutions
	  – Maximum width: 8192 pixels
	  – Maximum height: 7680 pixels

	4x 12G-SDI • Compatible with SD-SDI, HD-SDI, 3G-SDI and 6G-SDI • Support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) **8x 10G OPT** • Support for single-mode and multi-mode optical outputs • Transmission distance up to 10km in single mode • Support for 8-channel embedded audio (24bit/48kHz) • OPT ports copy outputs on video connectors – OPT 1 and OPT 2 copy the output from Group 1. – OPT 3 and OPT 4 copy the output from Group 2. – OPT 5 and OPT 6 copy the output from Group 3. – OPT 7 and OPT 8 copy the output from Group 4. **Status LEDs** Each HDMI output connector has a status LED which indicates the connection status of backend device. The 12G-SDI and optical port do not have status LEDs. • On: The output connection is normal. • Off: The output connection is abnormal.
Q8_HDMI2.0x4+ DP1.2x4+SFPx8 Output Card	 The 4x HDMI 2.0 and 4x DP 1.2 connectors are divided into 4 groups. Each group includes 1x HDMI 2.0 and 1x DP 1.2, and connectors within the same group copy each other's output. • Connector 1 (HDMI 2.0) and connector 5 (DP 1.2) form Group 1. • Connector 2 (HDMI 2.0) and connector 6 (DP 1.2) form Group 2. • Connector 3 (HDMI 2.0) and connector 7 (DP 1.2) form Group 3. • Connector 4 (HDMI 2.0) and connector 8 (DP 1.2) form Group 4. **4x HDMI 2.0** • Up to 4K×2K@60Hz 8bit 4:4:4 or 4K×2K@60Hz 12bit 4:2:2 output • Support for 8-bit, 10-bit and 12-bit output settings • Support for 4:2:2 and 4:4:4 output settings • Support for YCbCr and RGB color space settings • Support for HDR outputs • Support for color gamut adjustment • Support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels

	4x DP 1.2 • Up to 4K×2K@60Hz 10bit 4:4:4 or 4K×2K@60Hz 12bit 4:2:2 output • Support for 8-bit, 10-bit and 12-bit output settings • Support for 4:2:2 and 4:4:4 output settings • Support for YCbCr and RGB color space settings • Support for 3D outputs • No support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels **8x 10G OPT** • Support for single-mode and multi-mode optical outputs • Transmission distance up to 10km in single mode • Support for 8-channel embedded audio (24bit/48kHz) • OPT ports copy outputs on video connectors – OPT 1 and OPT 2 copy the output from Group 1. – OPT 3 and OPT 4 copy the output from Group 2. – OPT 5 and OPT 6 copy the output from Group 3. – OPT 7 and OPT 8 copy the output from Group 4. **Status LEDs** Each HDMI and DP output connector has a status LED which indicates the connection status of backend device. The optical port does not have status LEDs. • On: The output connection is normal. • Off: The output connection is abnormal.
Q8_1xST2110(100G)+4x12G-SDI Output Card	 • 100G OPT for video source transmission, control, and synchronous clock input. • Simultaneous input of primary and backup video sources, enabling seamless transition when necessary. • Support for edge blending, output rotation, 3D, virtual pixel configuration, and LCD bezel compensation. • No support for creating screens with other output cards or HDCP settings. **2x 100G OPT** • 1 primary and 1 backup per output card • Up to 4x 4K×2K@60Hz 12bit 4:4:4 • Support for processing of 8-bit, 10-bit and 12-bit outputs • Support for 4:2:2 and 4:4:4 outputs

	• No support for interlaced video signal • Standard: Support SMPTE ST 2110 (-10, -20) and SMPTE 2059 (-1, -2). • Backup: Support the SMPTE 2022-7 standard. • Custom resolutions – Maximum width: 8192 pixels – Maximum height: 7680 pixels • PixelFlow control: Support loading video stream configuration by SDP file or directly inputting. Exporting SDP file is also supported. Support setting the output resolution. – Support standard resolutions up to 4096×2160@60Hz or 7680×1080@60Hz. – Allow for custom output resolutions. • PTP settings: Support the IEEE 1588-2008 standard, enabling high-precision synchronization across different video streams when Lock to PTP is activated. • FEC configuration: With parameters set at the card level, this feature can automatically detect and correct errors during data transmission, enhancing the reliability of video signal transfer. Support RS-FEC and NO-FEC encoding methods. This feature requires configuration on the switch before it can be used. • IP address: IPv4 DHCP and static IP • Multicast protocol: IGMPv3 • Ethernet: – 100 GbE IEEE 802.3ba (100GBASE-LR) – 100 GbE IEEE 802.3ba (100GBASE-SR) – 100 GbE IEEE 802.3ba (100GBASE-CR) • Port configuration You can configure the port information through the following two methods: – Import the SDP file in PixelFlow for configuration. – Directly input the video stream configuration in PixelFlow. **4x 12G-SDI** • These connectors copy the 4x 4K outputs of the 100G OPT ports • Up to 4K×2K@60Hz 10bit YCbCr 4:2:2 outputs • Support for YCbCr 4:2:2 output settings • Support for interlaced video signal • Support for 8-channel embedded audio (24bit/48kHz) • No support for standard or custom resolutions **Status LEDs of 100G OPT** • On: The output connection is normal. • Off: The output is not connected or it is abnormal.

Control Card

ETHERNET

2x Neutrik Gigabit Ethernet ports

- The two Ethernet ports work as a copy channel for each other.
- Connect to the U5, U5 Pro or control computer.
- Transmit the input view information to the control computer or U5/U5 Pro event controller.
- Support control by central control command.

MVR

2x HDMI 2.0

Connect to the monitor to display the Multiviewer image in copy or independent mode.

- In independent mode, the two HDMI connectors are used to display two different MVR images.
- In copy mode, HDMI 2 copies the output on HDMI 1.

USB 3.0

1x USB 3.0

- Export device logs.
- Update the device and perform system repairs.

AUDIO

1x 3.5mm audio input, 1x 3.5mm audio output

- IN for external audio input connection.
- OUT for audio output.

Dante

2x digital network audio ports for audio input and output.

- RJ45 port
- Support network audio input and output.
- Support 8-channel audio.
- Support 64x64 audio swapping.

GENLOCK

1x GENLOCK IN, 1x GENLOCK LOOP

Support Bi-Level and Tri-Level.

- GENLOCK IN: Accept the external sync signal.
- GENLOCK LOOP: Loop the sync signal.

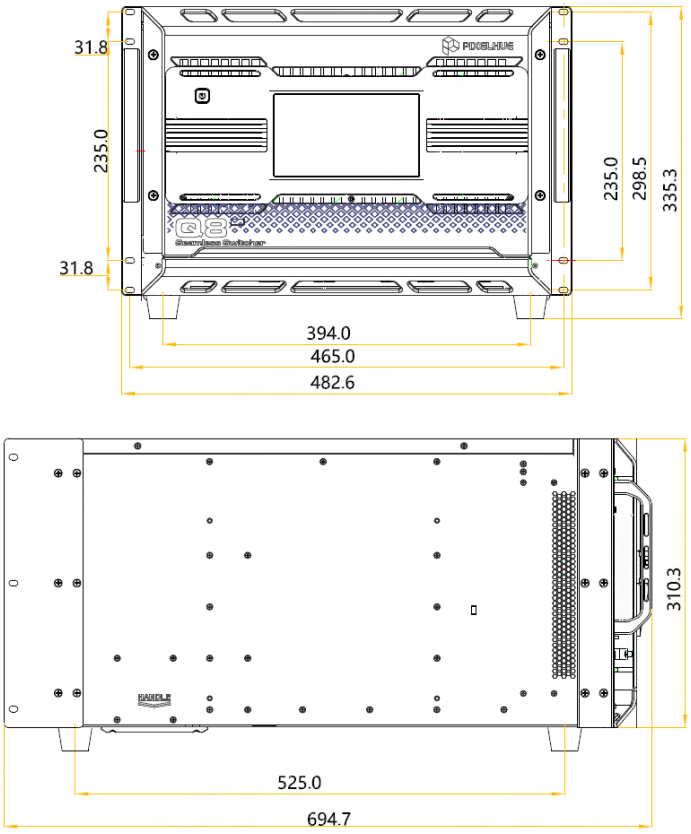
Power Connector

Support 2 primary and 1 backup power supplies. Before powering on the device, connect at least two power supplies.

Power specifications: 100-240V~, 50/60Hz, 10A-5A

Dimensions

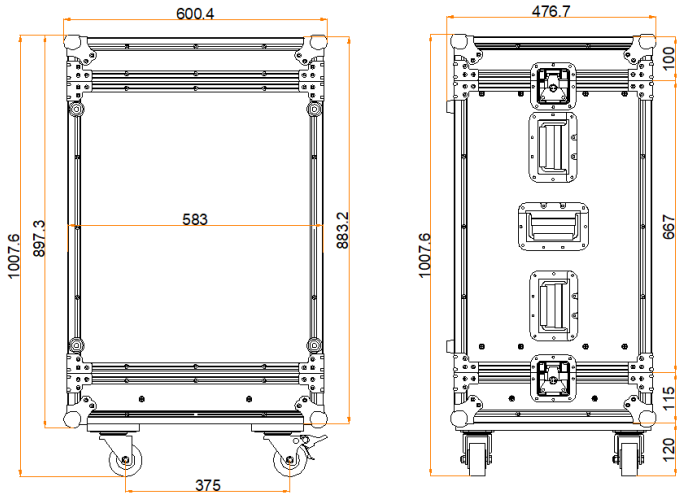
Device Dimensions



Tolerance: ±0.5

Unit: mm

Flight Case Dimensions

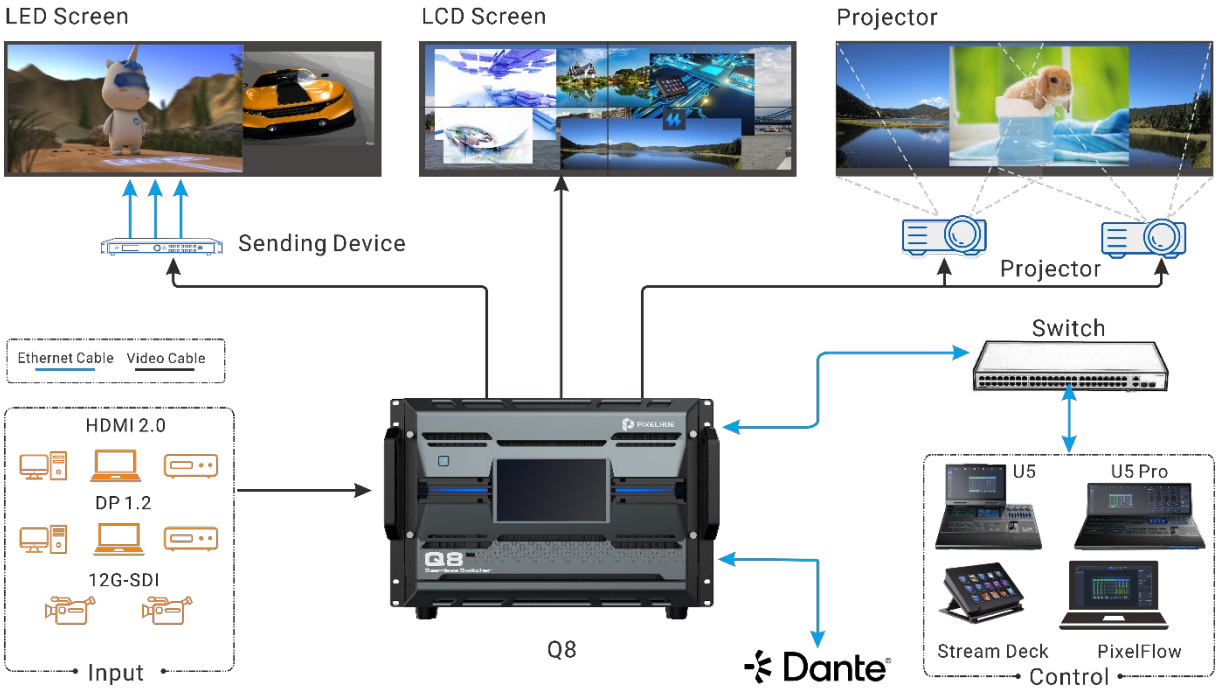


Tolerance: ±5 Unit: mm

Note

If you require detailed dimensions and drawings of the flight case, please contact PIXELHUE customer service team.

Applications



Specifications

Electrical Specifications	Power connector		100-240V~, 50/60Hz
	Power consumption (fully loaded)		1400 W
Operating Environment	Temperature		0°C to 50°C (32°F to 122°F)
	Humidity		0% RH to 80% RH, non-condensing
Storage Environment	Temperature		−20°C to +60°C (−4°F to +140°F)
	Humidity		0% RH to 95% RH, non-condensing
Physical Specifications	Space Requirement		7U
	Dimensions		482.6 mm × 694.7 mm × 335.3 mm
	Net weight		42.6 kg / 93.9 lbs
	Gross weight	Packed with a flight case	99.7 kg / 219.8 lbs Note: It is the total weight of the product, accessories, and packing materials packed with a flight case.
		Packed with a flight case, a paper box and a wooden pallet	123 kg / 271.2 lbs Note: It is the total weight of the product, accessories, and packing materials packed with a flight case, a paper box and a wooden pallet.

Packing Information	Flight case	1007.6 mm × 600.4 mm × 476.7 mm
	Paper box and wooden pallet for the flight case	1100 mm × 800 mm × 670 mm
	Accessories	3x Power cords, 1x Screwdriver, 2x Ethernet cables 1x Quick Start Guide, 1x Safety Manual, 1x Customer Letter, 1x Certificate of Approval
Noise Level (typical at 25°C/77°F)		45 dB (A)

Notes and Cautions

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Others

This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

The product can be mounted in a standard 19-inch rack capable of withstanding at least four times the total weight of the mounted equipment. Eight M6*16 screws should be used to fix the product.

This product can only be placed horizontally. Do not mount vertically or upside-down.

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Statement

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