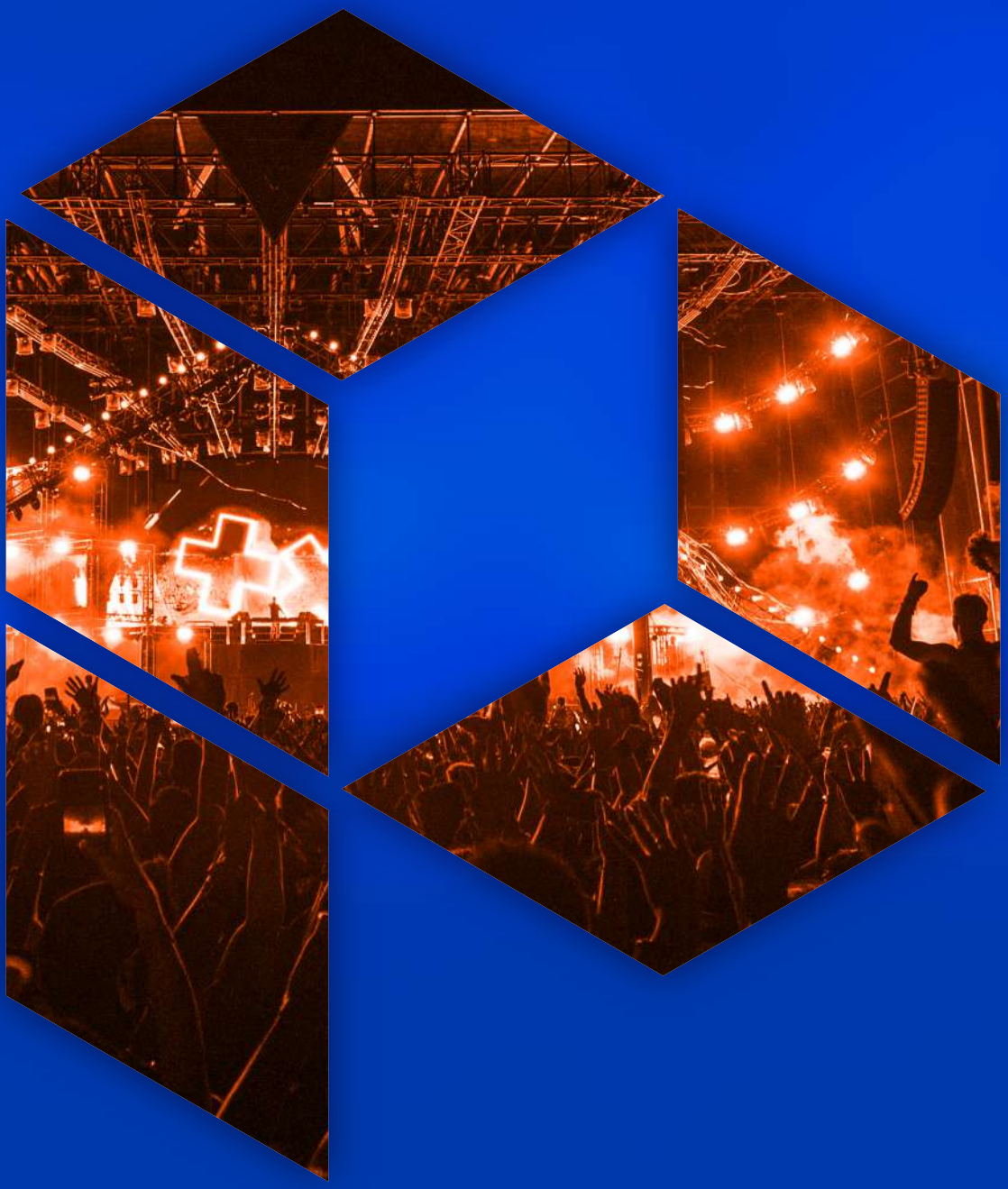
PIXELHUE



imagine beyond reality

PRODUCT CATALOG

EN _2025-DECEMBER

www.pixelhue.com

PIXELHUE, founded in 2017, is a company built with one simple goal in mind, designing the best quality products that push the envelope of what technology can do. Pixelhue is a company born of this desire to innovate, creating new technologies and video processing solutions for the industry while never sacrificing stability and ease of use.

In Pixelhue, the video processing world now has a new major player. Our mission begins with the user experience & has the ultimate goal of providing users with authentic **audio-visual** expertise; and will work to **offer complete full-link** audio and video **solutions** with outstanding image quality, ultra-high specifications, high integration, & excellent ease of use.

PIXELHUE has invested around $5M into Research and Development team Recruitment, Products and algorithm development, product testing, etc., ensuring that products continue to push the boundaries of what the industry believes to be possible. We currently have 68 team members located in our two R&D centers in Beijing and Xi'an, committing to developing outstanding **high-performance image processing algorithms.**

WHO WE ARE

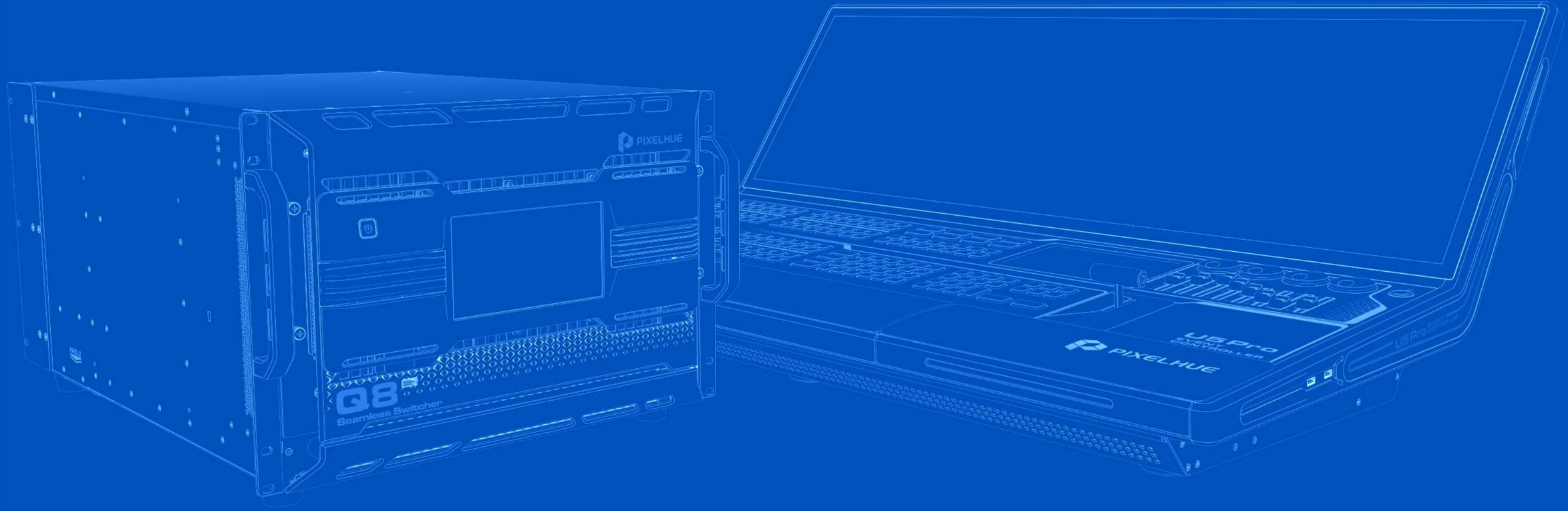
PIXELHUE

CONTENT

PIXELHUE

imagine reality *beyond*

PRESENTATION SWITCHER & CONSOLE



PIXELHUE
PRESENTATION SWITCHERS

BORN TO LEAD EVERY SCALE OF EVENT

P10

Small-Size Events

1 × 4K

P20/P20-DS

Small-Medium Events

2 × 4K

P80

Medium-Large Events

2-8 × 4K

Q8

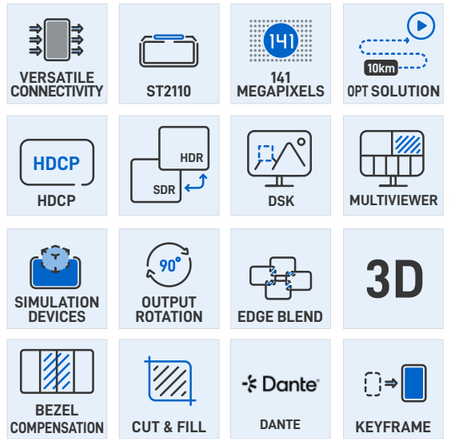
Mega Events

8-16 × 4K

PIXELHUE

Q8

One-as-All
4K Multi-Screen Management
Presentation Switcher



INCREDIBLE PERFORMANCE

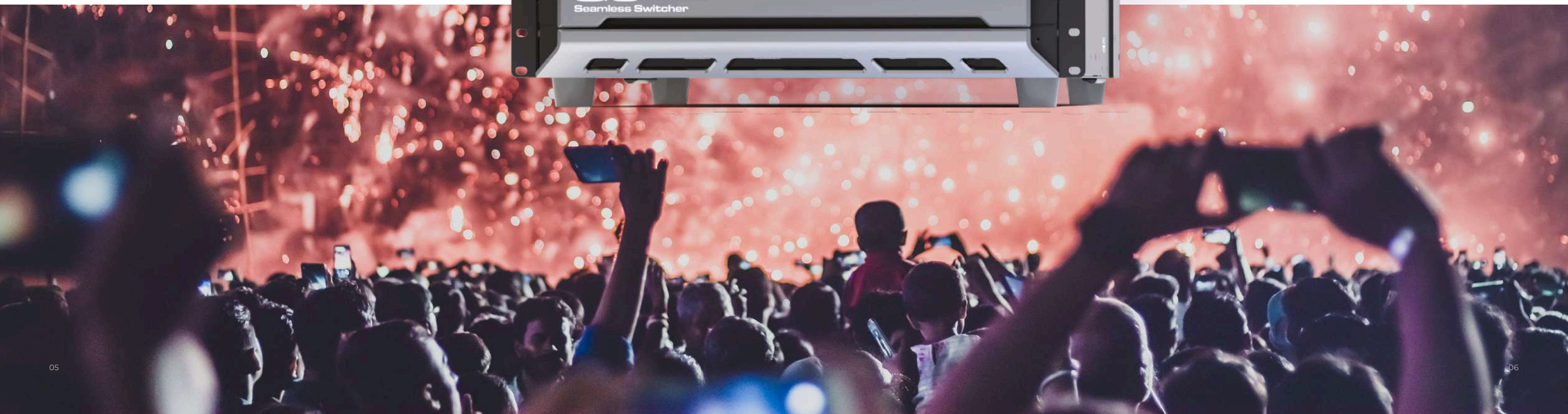
The Q8 presentation switcher offers incredible real-time 4K video processing power. It comes with at most 72x 4K input connectors and 64x 4K output connectors, supporting up to 48x 4K concurrent inputs and 16x 4K concurrent outputs. A maximum of 32x 4K mixing layers (true seamless transitions) in switcher mode are supported.

Moreover, the Q8 provides a variety of exceptional features. Multiple different connectors are designed on one input card or output card, including DP 1.2, HDMI 2.0 and 12G-SDI. The ST2110 input card supports 4x SFP25G ports, which not only offers high bandwidth and bitwidth but also allows flexible transmission of video, audio, and control data over IP networks. Additionally, the Q8 boasts the 8K video processing capability. With these capabilities, the Q8 enables you to design and manage all live events easily and economically. Thanks to the *VPU-based architecture, the number of layers on a single output card can be doubled, eliminating any concerns about running out of layer capacity.

LONGER TRANSMISSION DISTANCE, LOWER COST

In addition to the ability of outputting content from the 4K connectors, the Q8 presentation switcher is also capable of transmitting signals to the LED controllers from NovaStar[1] over a long distance (up to 10 km with single-mode optical fiber) without fiber converters. This method not only ensures the signal stability but also lowers the transmission cost, making it a perfect fit for long-distance signal transmission.

1. Currently supported controllers are VX1000, VX600, VX400, H series, MX40 Pro, MCTRL4K, and NovaPro UHD Jr.



Q8

One-as-All
4K/8K Multi-Screen Management
Presentation Switcher

VARIOUS CONTROL OPTIONS

Multi-Control

The Q8 is very easy to operate and supports flexible control options: versatile event controller U5/U5 Pro, all-new event management software PixelFlow, and third-party control system Stream Deck (Companion integrated into the Q8). You can use the control methods to realize various operations, such as preset related operations, blackout, freeze, and PVW to PGM operations. What's more, multiple switchers can be controlled simultaneously by a single event controller or PC with PixelFlow when they are on the same LAN and in the same project. This makes on-site control and operations a breeze.

EASY-TO-USE PixelFlow

Easy to Use

The Q8 works with the new PixelFlow, which has fully upgraded architecture, graphical user interface, interaction and ease of use designs. The new architecture enables the software to run 24/7 stably. The visualized user interface is adaptive to different screens of event controllers and computer, and the software allows you to change the skins of event controller buttons with one click, giving you a great look and feel. What's more, the event controller encoders and faders can control the software parameters, making operations smoother. With distinct function areas, hover menus and almost all the functions required in an event, the software guides you from beginning to end of any events with as little complex operation as possible.

ALL-ROUND SUPERB RELIABILITY

The Q8 presentation switcher supports full-link backup, from input source backup to device backup and power backup, to safeguard your live events. Once the input source is not stable or disappears, it will be switched to the backup source seamlessly. When the primary device fails, the backup device will take over the work immediately to ensure uninterrupted operation. Switching from the primary to backup input source or device with no downtime makes the solution highly reliable and worry-free.

Key Features

Switcher working mode
Up to 6x input cards with up to 72x 4K input connectors and up to 48x 4K concurrent inputs
Up to 4x output cards with up to 48x 4K output connectors available (4x HDMI 2.0, 12G-SDI or DP 1.2 + 8x OPT per output card) and up to 16x 4K concurrent outputs
A maximum of 32x 4K mixing layers (true seamless transitions) in switcher mode
Multiple different connectors on one input or output card, such as HDMI 2.0, DP 1.2 and 12G-SDI
4x SFP25G ports on the ST2110 input card, offering high bandwidth and bitwidth
Multi-screen configuration and control
Bezel compensation
Edge blending, supporting both simple and complex projection scenarios
Virtual pixel function for convenient layer configuration
Simple control via event controller, PixelFlow, and Stream Deck (Companion integrated into the Q8)
Device backup, input backup and output card backup, seamless switching from primary to backup
7" touchscreen on the front panel, support for real-time device status monitoring
Optical copying output supported, 10km long-distance signal transmission over single-mode optical fiber
4:4:4 4K@60Hz 10-bit internal processing
Cross-connector layer within a card does not occupy extra resources, full screen roaming
Free conversion between SDR, HDR10 and HLG
3D input, processing and output
Layer resource management
Up to 1024 presets with support for complete and relative presets
Layer effects: mask, border, flip, copy, shadow, cut and fill, KeyFrame and more
48kHz 64x64 Dante audio networking hardware and support
Dedicated 3.5 mm analog audio inputs and outputs
Still image management
Advanced DSK capability for input: smart key, luma key and chroma key
Individual RGB component adjustment for image quality parameters
Sync with input and external bi-level or tri-level Genlock signal
Live input view in PixelFlow
Support for multiple standard timings such as CEA, DMT, and SMPTE
Custom timing and frame rate on outputs
AOI function
Input EDID management, with support for preset, custom and advanced settings
Custom layout of output connectors
Output connector copying to quickly offer multiple same sources for backend devices
90° output rotation for creative display
Output mapping to enable easier screen configuration
Batch change of resolutions and frame rates of output connectors
HDCP 1.3, HDCP 1.4 and HDCP 2.2 for full-link content protection with a global switch for all inputs or outputs
Multiple backup modes, device diagnostics, project file import and export, log export and 2+1 power backup for super stability and reliability
Compatible with EDID on Mac and support for Mac mosaic
Support for antistatic settings to keep events smooth and successful
The system has passed 24/7 stability tests and is proven to be stable and reliable
*Built-in VPU function allows layer resources of one output card to be used by another output card
*Two Q8 devices linkable for input source sharing and uniform output mosaic and management

Technical Features

Inputs

- Up to 48x 4K concurrent inputs through 6 input cards
- Standard, custom and advanced EDID settings
  Custom resolutions: 3840×2160@60Hz, 4096×2160@60Hz, 8192×1080@60Hz, etc.
- Input source deinterlacing processing on 4 connectors of each input card
- Input source cropping
- Status LED indicators provided for easy troubleshooting

Outputs

- Up to 16x 4K concurrent outputs through 4 output cards
- Standard, custom and advanced output timing settings
- Output width up to 8192 pixels, better choice for LED applications
- Status LED indicators provided for easy troubleshooting

Layers

- Each Q8 supports up to 32x 4K mixing layers in switcher mode
- Full screen roaming supported
- Fade and Cut effects for PVW to PGM transition
- Layer effects: mask, border, flip, copy, shadow, cut and fill, KeyFrame and more
- Layer preset: All (or a portion) of the current layer's properties (such as input source, position, size, effects, etc.) can be saved as a layer preset in PixelFlow for easy recall

Audio

- Dante audio networking
  - Dual redundancy Gigabit Ethernet ports (AES67 compliant)
  - Audio de-embedding/embedding on every input & output (raw audio)
  - De-embedded audio channels can be routed directly to the Dante network
  - Audio channels from external Dante audio processor can be re-embedded for sending to display, streaming or recording device
  - 64x64 Dante channels @48 kHz
- Dedicated analog audio inputs and outputs
  - 2x 3.5 mm dual-channel audio jacks (1x line in & 1x line out)
  - Default sample rate: 48 kHz (backward compatible)
  - Bit depth: 8 bit/16 bit/24 bit

Multiviewer

- Two dedicated output connectors configured as Multiviewer connectors, with resolutions adjustable
- Independent and copying modes: The two connectors display different Multiviewer images, or the HDMI 2 copies the HDMI 1 output
- Monitor all inputs and screens (PVW and PGM)
- Customizable layouts for easy use
- UMD display and color adjustment
- Border adjustment for Multiviewer windows

Screens

- Output configured as single screens or edge-blended widescreens
- Multi-screen management and control
- Bezel compensation
- Edge blending, supporting both simple and complex projection scenarios
- Irregular screen mosaic and output AOI function, ideal for complex and irregular LED screen applications
- The sync source can be set independently for each screen

Still Image Management

- Still images can be imported or captured from input or output
- Unlimited still image quantity in 1 GB storage space
- Still images can be used as BKG and still layers
- Independent BKG for each screen
- BKG filling the whole screen by default, with adjustable position and size
- Up to 255 BKGs (max 1 GB in total) supported

Transition & Effects

- Smart key, luma key and chroma key
- Cut and fade transitions
- Customizable transition durations
- PVW to PGM via Take, Cut or T-bar operation
- Copy or Swap mode for PVW to PGM transition

Processing

- FPGA based high performance image processing architecture with SuperView scaling engine inside
- Ultra-low latency, as low as 1 frame in proper configuration
- BT.601, BT.709, BT.2020, DCI-P3 color space processing support
- Advanced keying capability: smart key, chroma key and luma key
- Compatible with HDCP 1.3, HDCP 1.4 and HDCP 2.2

Control Options

- Event controller U5/U5 Pro
- Event management software PixelFlow
- Third-party control system Stream Deck (Companion integrated into the Q8)

PixelFlow Functionalities

- Long-term stable running
- Upgraded and visualized UI, adaptive to U5/U5 Pro/PC screens
- One click to change skins of U5/U5 Pro buttons
- Software parameter controllable by U5/U5 Pro encoders or faders
- Distinct function areas and hover menu for ease of use
- Fully functional simulator for offline configuration and practice

MODULAR

Input Cards

Q8_ST2110_4xSFP25G Input Card_I

- 2 primary and 2 backup inputs per input card
- Standard: Supports SMPTE ST 2110 (-10, -20) and SMPTE 2059 (-1, -2) standards.
- Backup: Supports SMPTE 2022-7 standard.
- Resolutions:
  - Max resolution: 4096×2160@60Hz
  - Min resolution: 800×600@60Hz
- SDP management: Supports VESA standard input resolution.
- NMOS management: NMOS discovery and control according to standards IS-04 and IS-05
- Color gamut: BT.601/BT.709/BT.2020
- IP address: IPv4 DHCP and static IP
- Multicast protocol: IGMPv3, IGMPv2
- Ethernet:
  - 25 GbE IEEE 802.3cc (25GBASE-LR)
  - 25 GbE IEEE 802.3by (25GBASE-SR)

Q8_HDMI2.0+DP1.2+12G-SDI Input Card

- 8x 4K×2K concurrent inputs per input card
- 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
- 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
- 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)

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Q8_8xHDMI2.0+4x12G-SDI Input Card

- 8x 4K×2K@60Hz concurrent inputs per input card
- Deinterlacing for up to 8 inputs per input card
- Providing up to 8 sync sources per input card
- 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
- 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)

Output Cards

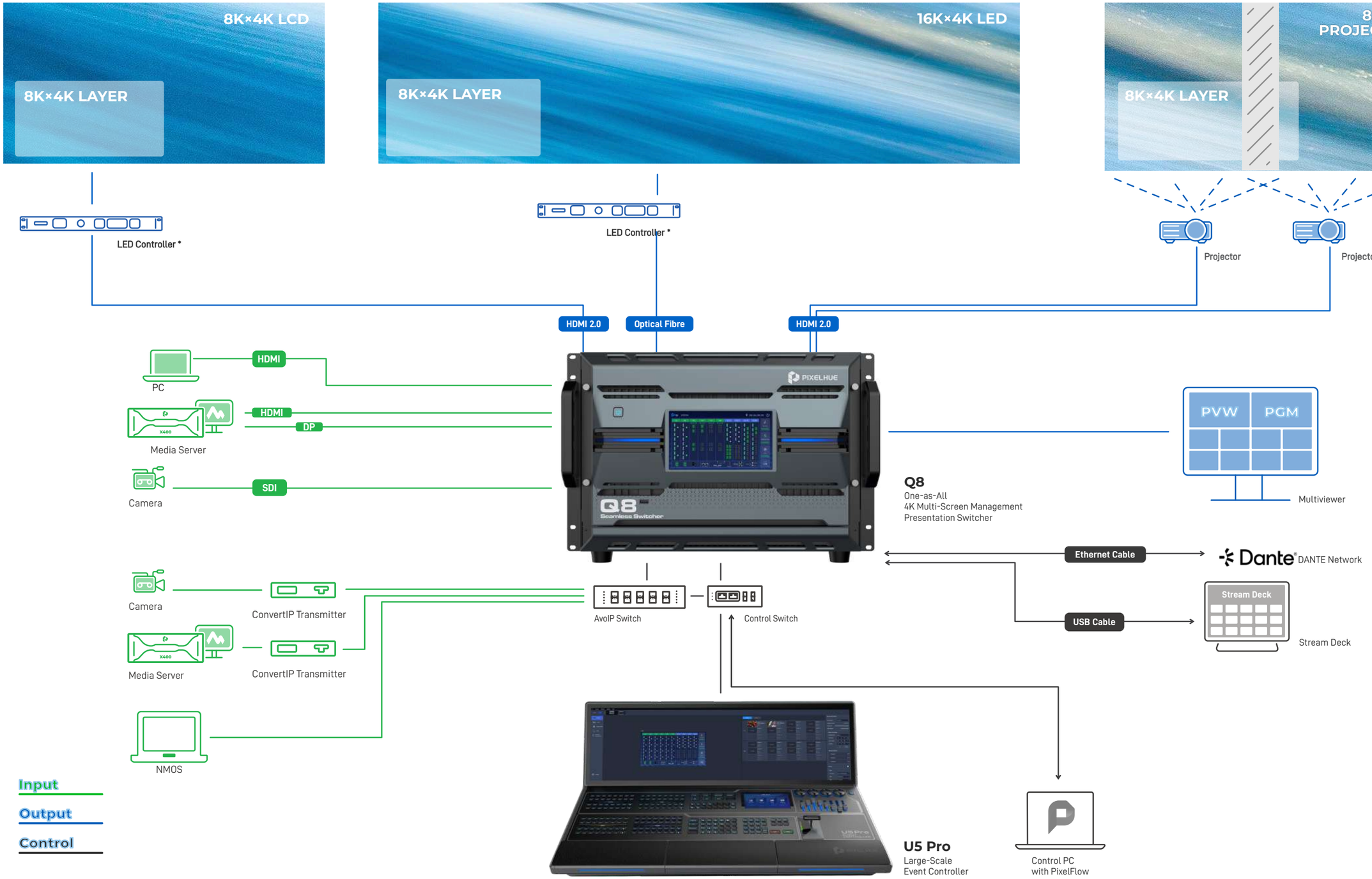
Q8_HDMI2.0+12G-SDI+Fiber Output Card

- 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 connectors, 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.

Q8_4xHDMI2.0+4xDP1.2+8xSFP Output Card

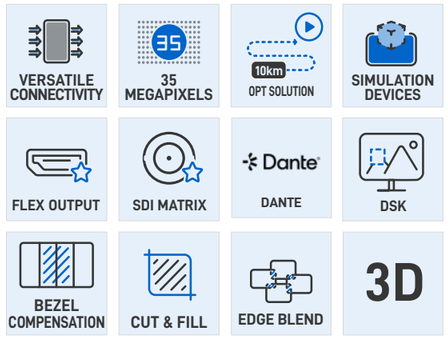
- The 4x HDMI 2.0 and 4x DP 1.2 connectors are divided into 4 groups. Each group includes 1x HDMI 2.0 and 1x DP 1.2 connectors, and connectors within the same group copy each other's output.
  - Connector 1 (HDMI 2.0) and connector 5 (DP 1.2) form Group 1.
  - Connector 2 (HDMI 2.0) and connector 6 (DP 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.

APPLICATION



P80

4K Presentation Switcher
for Unlimited Live Control



Versatile 4K Connectivity

The P80 presentation switcher features versatile 4K connectivity including HDMI 2.0, DP 1.2 and 12G-SDI. The P80 is designed with 12x fixed concurrent 4K inputs and a swappable input card with support for P_HDMI2.0_DP1.2_OPT Link Card and Q8_HDMI2.0+DP1.2+12G-SDI Input Card, making the P80 more capable. The P80 comes with 8x HDMI 2.0 main output connectors allowing for up to 4x 4K concurrent outputs (copy mode) or 8x DL concurrent outputs (split mode).

The P80 also supports 4x 4K flex outputs, 4x 12G-SDI matrix outputs, and 2x dedicated Multiviewer outputs. Additionally, 8x 10G SFP optical ports are offered to copy the HDMI 2.0 outputs, allowing for up to 4x 4K outputs.

Powerful Functionalities

The P80 employs FPGA-based high-performance image enhancement architecture and real 4K60p 4:4:4 10-bit internal video processing. The P80 supports up to 8x 4K mixing main layers and 4x 4K mixing PIP layers. Up to 256 presets and 256 layer presets can be saved for easy recall. This powerful multi-screen and multi-layer presentation switcher is ideal for medium to large-scale live events and permanent video wall installations requiring high reliability, unrivaled ease of use, optimal image quality and cutting-edge live 4K processing features. Seamless transitions, smooth video display and various visual effects maximize audience engagement.

Flex Output

The P80 comes with 4x HDMI 2.0 for flex outputs which can be freely configured as independent screens or edge-blended widescreens . Transition effects such as fade, test patterns, AOI, virtual pixels, and more are available for the flex screens. Up to 4x 4K mixing PIP layers and 4x still BKG are supported, allowing for adjustment of layer position, size and Z-order, layer effects including flip, crop and mask, layer color adjustment, and layer presets. In addition, flex outputs support Multiviewer. Auxiliary devices such as teleprompters also can be connected to the flex output connectors. The flex outputs expand the range of the application scenarios of the P80.

SDI Matrix

4x 12G-SDI are provided for matrix outputs, allowing any content from the input sources such as HDMI 2.0, DP 1.2 and 12G-SDI, MVR, PGM and flex outputs to be mapped to the SDI matrix. SDI matrix offers more flexible output options for users and enhances the versatility of the P80.

Flexible Control Options

The P80 is exceptionally easy to control via any of the following options:

- 7-inch graphical touchscreen on the front panel
- Event controller U5/U5 Pro
- Event management software PixelFlow
- Third-party control system Stream Deck (Companion integrated into the P80)

In addition, multiple P80 units can be controlled simultaneously from a single event controller/PC with PixelFlow when they are on the same LAN and in the same project.

P80

KEY FEATURES

- Versatile 4K connectivity: HDMI 2.0, DP 1.2 and 12G-SDI
- Up to 12x fixed concurrent 4K inputs and a swappable input card
- 8x HDMI 2.0 main output connectors configurable as independent screens or edge-blended widescreens
- Up to 4x 4K concurrent main outputs (copy mode) or 8x DL concurrent main outputs (split mode)
- 8x 10G SFP optical ports for copying output and long-distance signal transmission
- 4x HDMI 2.0 flex outputs configurable as independent screens or edge-blended widescreens
- 4x 12G-SDI matrix for mapping any content from the input sources, MVR, PGM and flex outputs to the output
- 2x HDMI 2.0 for connecting to Multiviewer screens
- Up to 8x 4K mixing main layers and up to 4x 4K mixing PIP layers
- 48kHz 64x64 Dante audio networking hardware and support
- Up to 256 relative and complete presets for easy recall
- Free conversion between SDR, HDR10 and HLG
- Advanced DSK capability: smart key, chroma key and luma key
- Device backup, copying output, input source backup, and dual power supply redundancy to guarantee stability and reliability
- Visualized live view of input and output connector statuses for easy troubleshooting
- Virtual pixel function for convenient layer configuration
- Multiple standard timings such as DMT, CEA, SMPTE and VESA
- Custom EDID with support for reduced blanking and HBlank settings
- Compatible with EDID on Mac and support for Mac mosaic
- HDCP 1.3, HDCP 1.4 and HDCP 2.2 for full-link content protection with a global switch for all inputs or outputs
- Antistatic settings to keep events smooth and successful
- Rugged 4RU chassis with cleanable dust filter
- The system has passed 24/7 stability tests and is proven to be stable and reliable.

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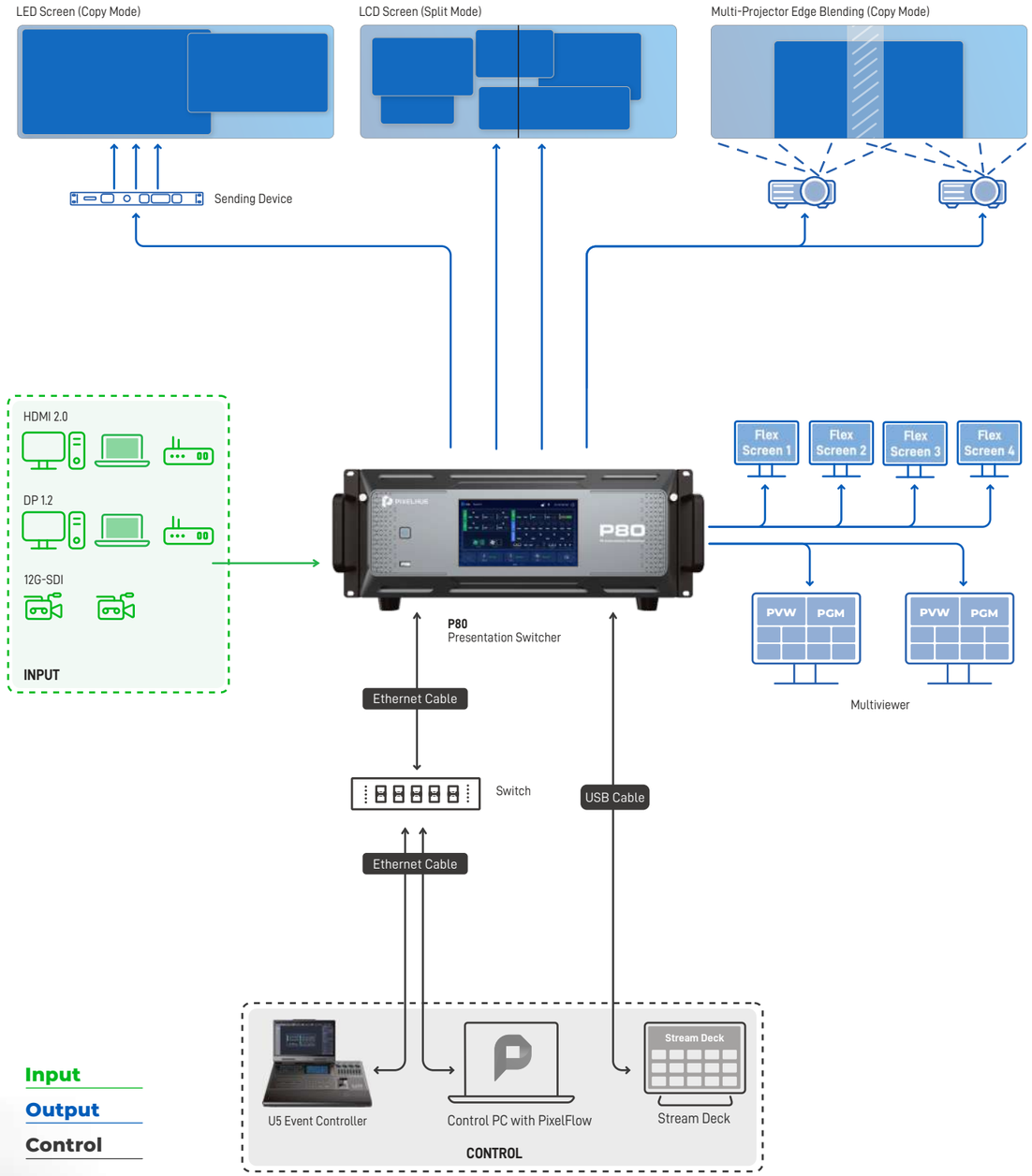
APPLICATION



SWAPPABLE INPUT CARD

P_HDMI2.0_DP1.2_OPT Link Card

- 2x HDMI 2.0
- 2x HDMI 2.0/DP1.2 (Only one type of connector can be selected as the input source at the same time.)
- 2x OPT (100G) for linking to more devices to share input sources (*to be implemented in future updates)
- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz 8bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Dynamic range: HDR10/HLG/SDR
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.4 compliant
  - No support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)
- DP 1.2
  - Maximum resolution: 4096×2160@60Hz 10bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.3 compliant
  - No support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)

Q8_HDMI2.0+DP1.2+12G-SDI Input Card

- 4x HDMI 2.0
- 4x DP1.2
- 12G-SDI not available*
- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz 8bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Dynamic range: HDR10/HLG/SDR
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.4 compliant
  - Support for interlaced video signal
  - No support for deinterlacing processing
  - Support for 8-channel embedded audio (24bit/48kHz)
- DP 1.2
  - Maximum resolution: 4096×2160@60Hz 10bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.3 compliant
  - No support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)

Inputs

- 12x fixed 4K concurrent inputs:
  - 4x HDMI 2.0
  - 4x HDMI 2.0/DP 1.2 (Only one type of connector can be selected as the input source at the same time.)
  - 4x 12G-SDI
- HDMI 2.0:
  - Maximum resolution: 4096×2160@60Hz 8bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Dynamic range: HDR10/HLG/SDR
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.4 compliant
  - No support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)
- DP 1.2:
  - Maximum resolution: 4096×2160@60Hz 10bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Quantization range: Full/Limited
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.3 compliant
  - No support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)
- 12G-SDI:
  - Support for ST-2082 (12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD), and ST-259 (SD) video inputs
  - Compatible with SD-SDI, HD-SDI, 3G-SDI and 6G-SDI
  - Maximum resolution: 4096×2160@60Hz 10bit 4:2:2
  - Support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)

Main Outputs

- 8x HDMI 2.0 main output connectors
  - Up to 4x 4K concurrent main outputs in copy mode
  - Up to 8x DL concurrent main outputs in split mode
- 8x 10G SFP optical ports are offered to copy the HDMI 2.0 outputs.
- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz 8bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Bit depth: 8bit/10bit/12bit
  - Color space: YCbCr/RGB
  - Dynamic range: HDR10/HLG/SDR
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.4 compliant
  - Support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)

Flex Outputs

- 4x HDMI 2.0 flex output connectors
- Configurable as independent screens or edge-blended widescreens with support for Multiviewer, transition effects such as fade, test patterns, AOI, virtual pixels, etc.
- Up to 4x 4K mixing PIP layers and 4x still BKG with support for adjustment of layer position, size and Z-order, layer effects including flip, crop and mask, layer color adjustment, and layer presets.
- Auxiliary devices such as teleprompters also can be connected.
- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz 8bit 4:4:4
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Bit depth: 8bit/10bit/12bit
  - Color space: YCbCr/RGB
  - Dynamic range: HDR10/HLG/SDR
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 and HDCP 1.4 compliant
  - Support for interlaced video signal
  - Support for 8-channel embedded audio (24bit/48kHz)

SDI Matrix

- 4x 12G-SDI matrix for mapping any content from the input sources, MVR, PGM and flex outputs to the output
- 12G-SDI
  - Compatible with HD-SDI, 3G-SDI and 6G-SDI
  - No support for bit depth and color space settings
  - Support for 8-channel embedded audio (24bit/48kHz)

Dante Audio Networking

- Dual redundancy Gigabit Ethernet ports (AES67 compliant)
- Audio de-embedding/embedding on every input & output (raw audio)
- De-embedded audio channels can be routed directly to the Dante network
- Audio channels from external Dante audio processor can be re-embedded for sending to display, streaming or recording device
- 64×64 Dante channels @48 kHz

Multiviewer

- 2x HDMI 2.0 for connecting to Multiviewer screens to monitor all the input sources, PVW and PGM.
- Allows users to select independent or copy mode and select a standard resolution and frame rate for the connectors.
  - In independent mode, 2x concurrent DL outputs are supported.
  - In copy mode, 1x 4K output and 1x copying output are supported.
- A variety of Multiviewer layout templates are provided and custom layout is supported.
- The Multiviewer windows can be resized and repositioned, and the width, height and color of the border can be adjusted.
- Intuitive and upgraded MVR interaction, including maintaining source aspect ratio, snapping between canvas and MVR window, adjusting background color, and customizing UMD color, display content, and font settings, as well as canvas scaling

Ethernet

- 2x Gigabit Ethernet ports used for control and input view
- One works as primary and the other as backup.
- Two Ethernet ports share the same IP address.

Genlock

- Genlock synchronization signal input
- Genlock synchronization signal output (with support for loop-through)

Screens

- Output connectors can be freely configured as independent screens or edge-blended widescreens.
- Up to 4x 4K main screens and 4x flex screens are supported.
- Multi-screen mosaic
- Users can arrange the mosaic layout manually or select a layout template. If a connector used for mosaic fails, it can be replaced with another normal connector in the software.
- Edge blending and LCD bezel compensation
- Virtual pixel configuration is supported, simplifying calculations between on-site screen size and P80-loaded screen pixels.
- AOI (Area of Interest) feature to customize active areas of outputs
- Custom test patterns

Layers

- Up to 8x 4K mixing main layers are supported.
- Any of the inputs, Multiviewer, PGM, or local images can be selected as the source of a layer.
- Layers can be repositioned and resized.
- The Z-order of layers can be adjusted.
- Layer names are displayed and can be modified.
- Layer resource usage are displayed in real time.
- Layer effects: DSK, mask, crop, flip, cut & fill, border, shadow and more
- Layer presets: All (or a portion) of the current layer's properties (such as input source, position, size, effects, etc.) can be saved as a layer preset in PixelFlow for easy recall. Up to 256 layer presets can be saved.

Presets

- Up to 256 presets can be saved for easy recall.
- Relative and complete presets are supported to satisfy more application requirements.
- Allows users to select preferred parameters such as transition duration and input source to save to a preset.
- Presets can be loaded to PVW or PGM.

BKG

- Images imported from the control computer or event controller can be used as BKG.
- Images captured from input sources and PGM can be used as BKG.
- One dedicated still BKG image available on each PGM output. Up to 4 still BKG supported.
- BKG can be turned on or off.
- The BKG image can be changed and deleted.
- The BKG storage capacity is up to 1 GB and PNG/BMP/JPG/JPEG files are supported.
- The BKG image automatically scales to fit the screen while maintaining aspect ratio and is positioned at the bottom layer by default.

Transition & Effects

- Seamless transition from PVW to PGM via Take, Cut or T-bar
- Two options for transition between PVW and PGM: Copy and Swap
- Customizable transition duration (0.1s to 10s)
- Fade in and out supported
- Screen freeze and FTB (Fade to Black) supported

PixelFlow Software Functionalities

- Long-term stable running
- Upgraded and visualized UI, adaptive to U5/U5 Pro/PC screens
- One click to change skins of U5/U5 Pro buttons
- Software parameter controllable by U5/U5 Pro encoders or faders
- Distinct function areas and hover menu for ease of use
- Fully functional simulator for offline configuration and practice

Processing Capability

- FPGA-based high-performance image enhancement architecture
- Ultra-low latency, as low as 1 frame in proper configuration
- BT.601, BT.709, BT.2020, DCI-P3 color space processing support
- Free conversion between SDR, HDR10 and HLG
- Advanced DSK capability: smart key, chroma key and luma key
- Compatible with HDCP 1.3, HDCP 1.4 and HDCP 2.2

Supported Resolutions

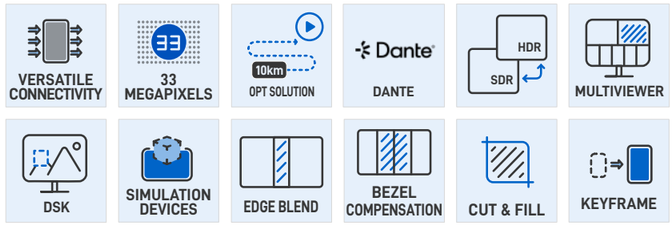
Input	Bit Depth	Sampling Format	Supported Resolutions	Connector Bandwidth
HDMI 2.0	8bit	RGB 4:4:4 YCbCr 4:4:4 YCbCr 4:2:2	4096×2160@60Hz 8192×1080@60Hz	18 Gbps
	10bit	RGB 4:4:4 YCbCr 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
	12bit	RGB 4:4:4 YCbCr 4:4:4	4096×2160@30Hz 4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
DP 1.2	8bit	RGB 4:4:4 YCbCr 4:4:4 YCbCr 4:2:2	8192×1080@60Hz 4096×2160@30Hz 3840×2160@60Hz	21.6 Gbps
	10bit	RGB 4:4:4	8192×1080@60Hz 4096×2160@60Hz 3840×2160@60Hz	
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	12bit	RGB 4:4:4 YCbCr 4:4:4	4096×2160@30Hz	
		YCbCr 4:2:2	8192×1080@60Hz 3840×2160@60Hz	
12G-SDI	10 bit	YCbCr 4:2:2	4096×2160@60Hz	11.88 Gbps

P_EN_2025-03-26
*This datasheet includes features up to V1.6.0.

P SERIES

P20/P10
4K Presentation Switchers

Ideal for Small/Medium-Sized Events



P20-DS

Presentation Switcher

P20

Presentation Switcher

P10

Presentation Switcher

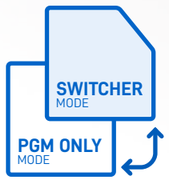
Flawless Live 4K Processing

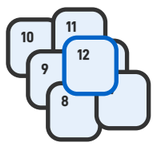
The P20/P20-DS/P10 are PIXELHUE's all-new 4K presentation switchers fully featured in a compact form factor. Featuring high-quality 4K processing, the P20/P20-DS/P10 are designed with a wide variety of 4K connectors, including HDMI 2.0, DP 1.2 and 12G-SDI.

The P20/P20-DS/P10 can work in switcher mode or PGM only mode. In switcher mode, a single P20/P20-DS supports up to two 4K×2K@60Hz outputs and a single P10 supports one 4K×2K@60Hz output. In PGM only mode, the output resolution per P20/P20-DS is up to 8K×4K@60Hz and P10 is up to 8K×2K@60Hz.

Additionally, the P20/P20-DS/P10 come with dedicated AUX outputs connecting to auxiliary devices and a dedicated Multiviewer output is provided for live view of all the inputs and outputs from one display. High-performance image deinterlacing is also supported.

Powerful Functionalities





The P20/P20-DS/P10 employ FPGA-based high-performance image enhancement architecture and real 4K60p 4:4:4 10-bit internal video processing. With dual working modes, versatile 4K connectivity, high-quality video processing, multi-screen configuration and control, flawless image mosaic, LCD bezel compensation, multi-projector edge blending and much more, the P20/P20-DS/P10 are perfect fits for small/medium-sized live events and many fixed installations requiring high reliability, unrivaled ease of use, optimal image quality and cutting-edge live 4K processing features. Seamless transitions, smooth video display and various visual effects maximize audience engagement.

Dual working modes make the P20/P20-DS/P10 more capable, allowing users to choose the switcher mode or PGM only mode as needed. Multi-screen configuration and control can meet more application requirements. The P20/P20-DS supports up to 12 DL layers (2×MAIN+10×PIP) or 8 DL layers (4×MAIN+4×PIP) and the P10 supports up to 6 DL layers (2×MAIN+4×PIP). Layer layout is customizable and a variety of layer effects such as DSK, mask, crop, flip, cut & fill, border, shadow and KeyFrame are supported. Up to 128 presets can be saved for easy recall. High-resolution images can be captured from live inputs and outputs and used as BKG. In addition, the P20/P20-DS allows for free conversion between SDR, HDR10 and HLG, and the P20-DS supports Dante audio networking.

Longer Transmission Distance

10G optical fiber ports are provided for copying HDMI 2.0 output, allowing the P20/P20-DS/P10 to transmit signals to the LED controller (VX1000, VX600, VX400, H series, MX40 Pro, MCTRL 4K and NovaPro UHD Jr from NovaStar are currently supported) over a long distance (up to 10 km with SMF) without fiber converters. This method not only ensures the signal stability but also lowers the transmission cost, making the P20/P20-DS/P10 ideal for long-distance signal transmission.

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Flexible Control Options

In addition to superior performances and outstanding visual experience, the P20/P20-DS/P10 are exceptionally easy to control via any of the following options. Multiple switchers can be controlled simultaneously by a single event controller/PC with PixelFlow when they are on the same LAN and in the same project.

- Fully-featured front panel buttons and 5-inch graphical LCD
- Versatile event controller U5/U5 Pro
- All-new event management software PixelFlow
- Third-party control system Stream Deck (Companion integrated into the switcher)

Superb Stability & Reliability

The P20/P20-DS/P10 are created for applications requiring the highest stability and uptime. Different backup methods are supported, including device backup, input source backup, automatic output backup. Once the primary input source is not stable or disappears, it will be switched to the backup source seamlessly. When the primary device fails, the backup device will take over the work immediately to ensure uninterrupted operation. Seamless switching from the primary to backup device or connector with no downtime makes the products highly reliable and worry-free.

What's more, the products have passed a series of rigorous drop tests, shock & vibration tests and thermal tests, ensuring the products can survive in any kind of road trip or event environment.

Key Features

- Switching between switcher mode and PGM only mode
- Versatile 4K connectivity: HDMI 2.0, DP 1.2 and 12G-SDI
- 10G optical fiber ports for copying output and long-distance signal transmission
- P20/P20-DS: Up to 2x 4K×2K@60Hz outputs in switcher mode and output resolution per P20/P20-DS in PGM only mode up to 8K×4K@60Hz
- P10: 1x 4K×2K@60Hz output in switcher mode and output resolution per P10 in PGM only mode up to 8K×2K@60Hz
- Multi-screen configuration and control
- Custom layout of output connectors
- AUX outputs allowing auxiliary devices such as teleprompters to be connected
- A dedicated Multiviewer output allowing for live view of the PGM & PVW screens and all the connected sources from one display
- 2x Gigabit Ethernet ports used for control and live input view
- P20/P20-DS: Up to 12 DL layers (2×MAIN+10×PIP) or 8 DL layers (4×MAIN+4×PIP)
- P10: Up to 6 DL layers (2×MAIN+4×PIP)
- Layer effects: DSK, mask, crop, flip, cut & fill, border, shadow, KeyFrame and more
- Layer resource management
- Up to 128 presets with support for complete and relative presets
- Up to 255 BKGs & LOGOs (Maximum storage space: 512 MB)
- 12-bit/10-bit/8-bit video sources supported
- Free conversion between SDR, HDR10 and HLG (P20/P20-DS)
- 48kHz 32x32 Dante audio networking hardware and support (P20-DS)
- Advanced DSK capability: smart key, chroma key and luma key
- Individual RGB component adjustment for image quality parameters
- Deinterlacing of SDI video sources
- High-precision output synchronization in PGM only mode
- Various transition effects: fade and cut
- Bezel compensation
- Edge blending with support for easy overlap adjustment
- HDCP 1.4 and HDCP 2.2 for full-link content protection with a global switch for all inputs or outputs
- Device backup, copying output, and input source backup to guarantee stability and reliability
- Visualized live view of input and output connector statuses
- 5-inch graphical LCD allowing for a more intuitive user experience
- Virtual pixel function for convenient layer configuration
- Multiple standard timings such as DMT, CEA and SMPTE
- Custom EDID with support for reduced blanking and HBlank settings
- Compatible with EDID on Mac and support for Mac mosaic
- Support for antistatic settings to keep events smooth and successful
- The system has passed 24/7 stability tests and is proven to be stable and reliable.

Technical Features

PIXELHUE

Inputs

For an input that contains a DP 1.2 and an HDMI 2.0, only one connector can be used as the input source at the same time.

- DP 1.2
  - Maximum resolution: 4096×2160@60Hz/ 8192×1080@60Hz
  - Minimum resolution: 800×600@60Hz
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Maximum frame rate: 240 Hz
  - EDID management (support for standard resolutions up to 8192×1080@60Hz and custom resolutions)
  - HDCP 1.3 compliant
  - No support for interlaced video signal
  - (P20-DS) Support for dual-channel embedded audio (24bit/48kHz)
- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz/ 8192×1080@60Hz
  - Minimum resolution: 800×600@60Hz
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Maximum frame rate: 240 Hz
  - Support for HDR
  - EDID management (support for standard resolutions up to 3840×2160@60Hz and custom resolutions)
  - HDCP 2.2 compliant and backward compatible
  - Support for interlaced video signal
  - (P20-DS) Support for dual-channel embedded audio (24bit/48kHz)
- 12G-SDI
  - Support for ST-2082 (12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD)
  - Maximum resolution: 4096×2160@60Hz
  - Maximum frame rate: 60 Hz
  - Support for interlaced video signal
  - (P20-DS) Support for dual-channel embedded audio (24bit/48kHz)

Outputs

- HDMI 2.0
  - Maximum resolution: 4096×2160@60Hz/ 8192×1080@60Hz
  - Minimum resolution: 800×600@60Hz
  - Maximum width: 8192 pixels (8192×1080@60Hz)
  - Maximum height: 7680 pixels (1080×7680@60Hz)
  - Maximum frame rate: 240 Hz
  - Support for HDR
  - EDID management (support for standard resolutions up to 8192×1080@60Hz and custom resolutions)
  - HDCP 2.2 compliant and downward compatible
  - Support for interlaced video signal
  - (P20-DS) Support for dual-channel embedded audio (24bit/48kHz)
- HDMI 1.3 (P10)
  - Maximum resolution: 1920×1080@60Hz/ 2048×1080@60Hz
  - Minimum resolution: 800×600@60Hz
  - Maximum width: 2048 pixels (2048×1080@60Hz)
  - Maximum height: 2048 pixels (1080×2048@60Hz)
  - Maximum frame rate: 240 Hz
  - EDID management (support for standard resolutions up to 2048×1152@60Hz and custom resolutions)
  - HDCP 1.4 compliant and downward compatible
  - Support for interlaced video signal
- 12G-SDI (P20-DS)
  - Copying HDMI outputs
  - Compatible with SD-SDI, HD-SDI, 3G-SDI and 6G-SDI
  - Support for ST-2082 (12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD)
  - Maximum resolution: 4096×2160@60Hz
  - Support for interlaced video signal
  - Support for dual-channel embedded audio (24bit/48kHz)

OPT

- 10G optical fiber ports for copying HDMI outputs
- Transmission distance with SMF up to 10 km
- (P20-DS) Support for dual-channel embedded audio (24bit/48kHz)

Dante Audio Networking (P20-DS)

- Dual redundancy Gigabit Ethernet ports (AES67 compliant)
- Audio de-embedding/embedding on every input & output (raw audio)
- De-embedded audio channels can be routed directly to the Dante network
- Audio channels from external Dante audio processor can be re-embedded for sending to display, streaming or recording device
- 32×32 Dante channels @48 kHz

Multiviewer

- One dedicated HDMI 1.3 connector
- Connect to the Multiviewer display, allowing for live view of all the inputs and outputs from one display.
- The default output resolution is 1920×1080@60Hz and the frame rate can be changed.
- A variety of Multiviewer layout templates are provided.

AUX

- HDMI 1.3 connectors with support for interlaced video signal output
- Connect to auxiliary devices such as teleprompters.
- Default output resolution: 1920×1080@60Hz
- Maximum output resolution: 2048×1152@60Hz

Ethernet

- 2x Gigabit Ethernet ports used for control and input view
- One works as primary and the other as backup.
- Two Ethernet ports share the same IP address.

Genlock

Genlock synchronization signal connector

- GENLOCK IN: Synchronization signal input
- GENLOCK LOOP: Synchronization signal loop output

Transition & Effects

- Seamless transition from PVW to PGM via Take, Cut or T-bar operation
- Fade and cut transition effects supported
- Customizable transition durations (0.1s to 10s)
- Two options for transition between PVW and PGM: Copy and Swap

Layers

- P20/P20-DS: 2x MAIN DL layers and 10x PIP DL layers or 4x MAIN DL layers and 4x PIP DL layers
- P10: 2x MAIN DL layers and 4x PIP DL layers
- Layer effects: DSK, mask, crop, flip, cut & fill, border, shadow, KeyFrame and more
- Layer preset: All (or a portion) of the current layer's properties (such as input source, position, size, effects, etc.) can be saved as a layer preset in PixelFlow for easy recall.

BKG & LOGO

- Up to 255 BKGs & LOGOs (Maximum storage space: 512 MB)
- Imported images can be used as BKG and LOGO.
- High-resolution images captured from live inputs and outputs can be used as BKG.
- BKG can be repositioned and resized. LOGO can be repositioned only.

Control Options

- Front panel buttons and 5-inch graphical LCD
- Event controller U5/U5 Pro
- Event management software PixelFlow
- Third-party control system Stream Deck (Companion integrated into the switcher)

PixelFlow Software Functionalities

- Long-term stable running
- Upgraded and visualized UI, adaptive to U5/U5 Pro/PC screens
- One click to change skins of U5/U5 Pro buttons
- Software parameter controllable by U5/U5 Pro encoders or faders
- Distinct function areas and hover menu for ease of use
- Fully functional simulator for offline configuration and practice

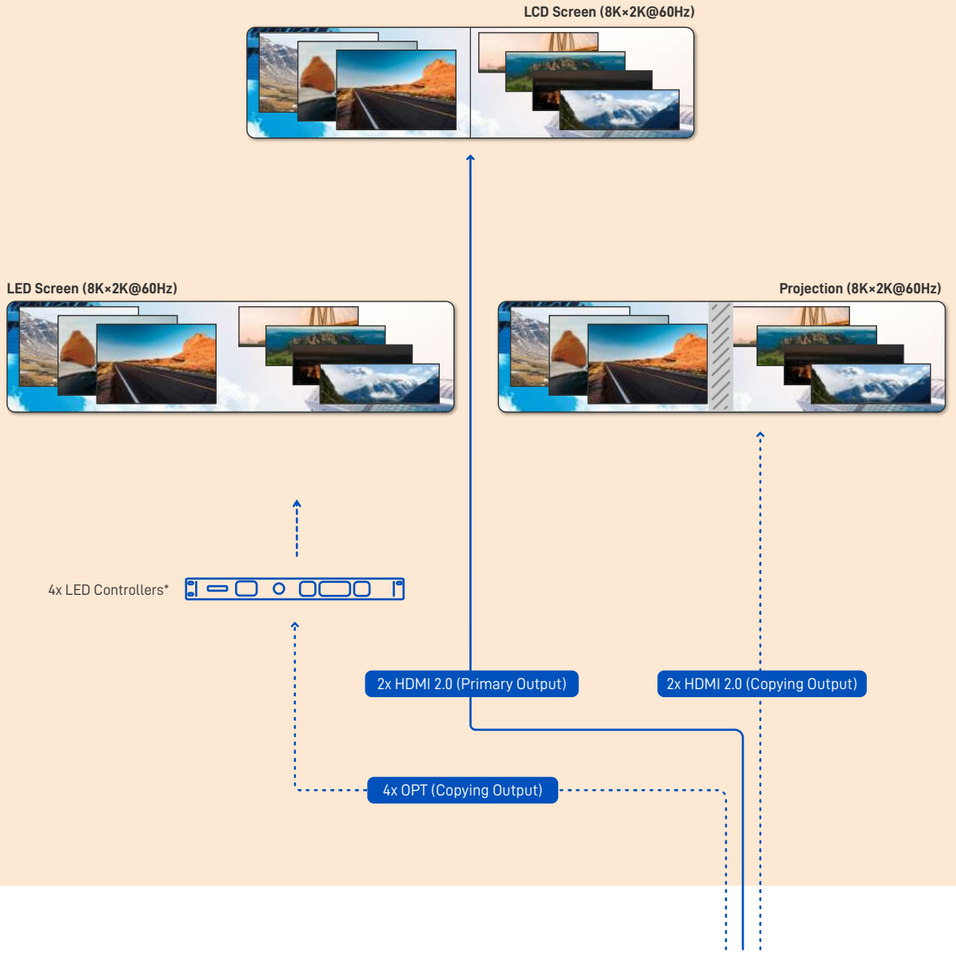
Processing Capability

- FPGA-based high-performance image enhancement architecture
- Ultra-low latency, as low as 1 frame in proper configuration
- BT.601, BT.709, BT.2020, DCI-P3 color space processing support
- Free conversion between SDR, HDR10 and HLG (P20/P20-DS)
- Advanced DSK capability: smart key, chroma key and luma key
- Compatible with HDCP 1.4 and HDCP 2.2

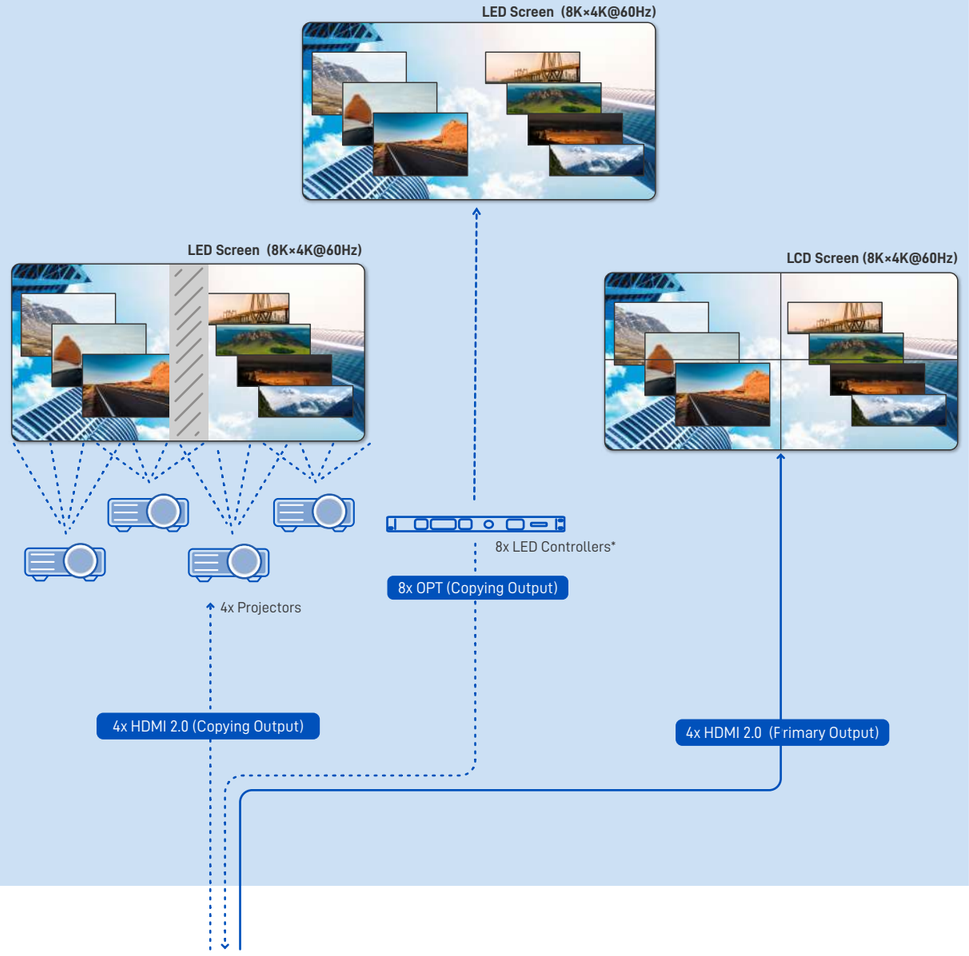
Supported Resolutions

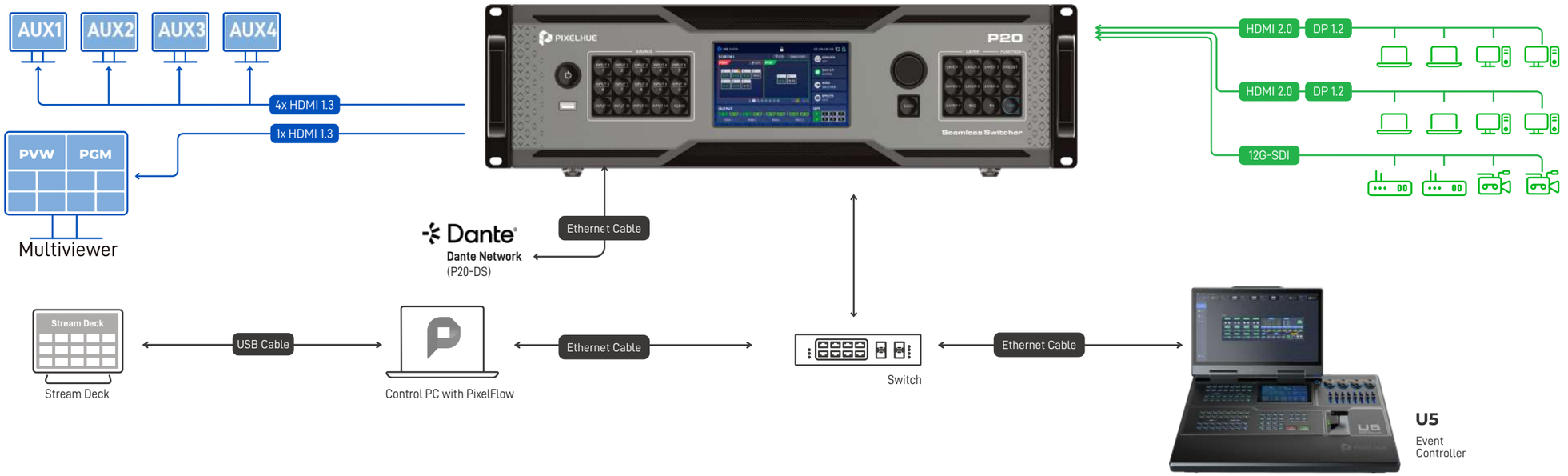
Input	Bit Depth	Sampling	Supported Resolutions	Supported Bandwidth
HDMI 2.0 DP 1.2	8bit	RGB 4:4:4 YCbCr 4:4:4 YCbCr 4:2:2	4096×2160@60Hz 8192×1080@60Hz	18 Gpbs
	10bit	RGB 4:4:4	4096×2160@30Hz	
		YCbCr 4:4:4	4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
	12bit	RGB 4:4:4	4096×2160@30Hz	
		YCbCr 4:4:4	4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
12G-SDI	8 bit 10 bit 12 bit	YCbCr 4:2:2	4096×2160@60Hz	11.88 Gpbs

SWITCHER MODE



PGM ONLY MODE





Input

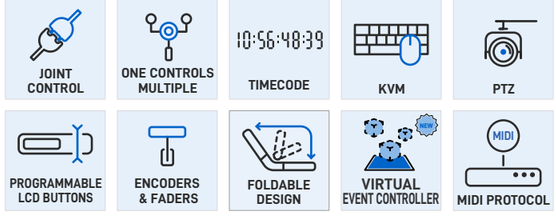
Output

Control

U5

Compact Event Controller

The U5 is a brand new compact-sized event controller developed by PIXELHUE. Compared to its predecessor, the U5 features smaller form factor, more innovative design highlights and more convenient operation and control over multiple different devices in the field, which will further facilitate your events today, such as corporate conferences, interactive live shows, music tours, immersive art exhibitions, and more.

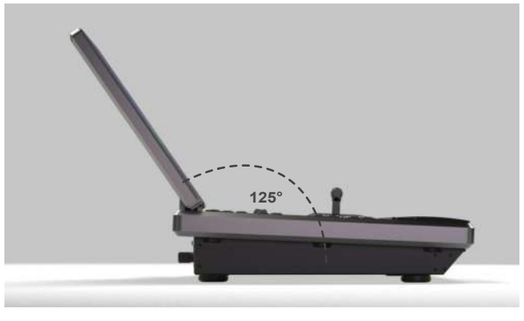


User-programmable LCD function buttons satisfy all your operation requirements in the field. Function names, pages and more can be clearly shown on the buttons, and the button skins and styles can be customized as you wish.

Smart Touchscreen provides supplementary display for still images, timecode info, device health statuses and Multiviewer info.

Four encoders and eight faders make the event operations amazingly convenient. Also, the encoders and faders can be bound with external MIDI functions for volume adjustment and more.

Abundant standard I/O connectors are provided on the rear panel to help you connect all necessary devices at ease.



Foldable design enables worry-free transportation and storage; gas strut design makes regular maintenance possible and easier.

PIXELHUE

U5 Pro

Large-Scale Event Controller

The U5 Pro is a large-scale event controller developed by PIXELHUE. Compared to its predecessor, the U5 Pro features more innovative design highlights and more powerful and friendly operation and control experience in the field, which will further facilitate your events today, such as large-scale interactive live events or shows, music tours, immersive art exhibitions, and more.

- JOINT CONTROL
- ONE CONTROLS MULTIPLE
- TIMECODE
- KVM
- PTZ
- ULTRA-WIDE SCREEN
- PROGRAMMABLE LCD BUTTONS
- ENCODERS & FADERS
- VIRTUAL EVENT CONTROLLER
- MIDI PROTOCOL

Ultrawide screen is designed for ultimate visualized operations. Multiple graphical user interfaces can be displayed on one screen, which also greatly simplifies the on-site deployment.

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A built-in keyboard is provided to further facilitate your operations in the field; two drawers are designed to satisfy the storage needs in the event scenarios.

A built-in keyboard is provided to further facilitate your operations in the field; two drawers are designed to satisfy the storage needs in the event scenarios.

APPLICATION

Ethernet Cable

LED Controller *

Optical Fiber

HDMI 2.0

HDMI 2.0

DP 1.2

12G-SDI

Presentation Switcher

Switch

Control PC with PixelFlow

USB Cable

Stream Deck

Stream Deck

Media Server

Timecode

Audio Console

Light Console

Input

Output

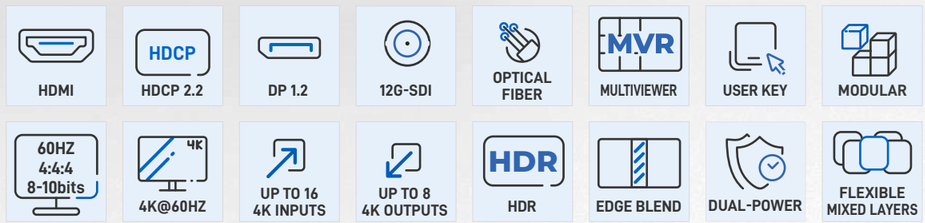
Control

* Only LED controllers from NovaStar are supported for now.

F Series

Flagship Flex-View Event Presentation Switchers

Powerful Seamless Switcher 48 megapixel, true 4K@60Hz



Highest erformance

PIXELHUE's Flex-View Seamless Switchers are specifically designed for easy management of multiple displays for shows or visual management systems, suitable for use with a variety of input formats and multiple display outputs.

Designed with the latest high-performance FPGA Chipset, the F series deliver reliable, stable, faster, and better image performance, and output non-compressed 4k@60Hz 4:4:4 10bits videos. Built with a focus on environmental protection, the PIXELHUE-designed foundation is a great long-term solution, simplifying upgrades through modules for future use.

What's better, the F series feature the support for projectors and irregularly shaped displays.

Ultimate Flexibility Through Modular Design

The Flex-View Seamless Switchers are designed with up to 8 input slots and 8 output slots, allowing you to easily select I/O modules with different input and output connectors to match the your visual system requirements. The module design allows for easy deployment and upgrade in the field, bringing more convenience and ease your on-site applications.

In addition, the the F series support at most 64x SL mixing layers, 32x DL mixing layers or 16x 4K mixing layers, and also support a variety of input and output connectors, including DVI, DP, HDMI, and 3G-SDI connectors, allowing for easy customization for any project or show.

Outstanding Onsite Stability by Backup Solution

The onsite stability and reliability is crucial to all the events. How to safeguard your event and make your display not go bad? PIXELHUE brings its own backup solution to make sure your event is a success. Through the signal backup, device backup and dual redundant power supplies, whenever the signal, device or power fails, the backup one will take over the job seamlessly and you will feel nothing has changed.

Total Event Control with U3 Controller

The U3 event controller has built-in an exceptional video processing software Triton, which provides the offline mode and pre-editing functionality, and helps you directly import while on-site and migrate between different devices. The easy-to-master and user-friendly graphical user interface guides you from beginning to end of any events with as little complex operation as possible. With the U3 event controller, the F series can satisfy any kind of event requirements such as stage performance, high-end auto shows, TV program recording, product launch events, or any kind of large-scale exhibitions.

Reliable & Worry-Free Operation

In this rapidly evolving market, reliable technology is the key to an outstanding event. Our F series devices allow you to configure the system to accommodate a variety of connectivity arrangements and display requirements. The F series feature dual power supplies, full machine data backup to local configuration, fast restoration, and working perfectly 24/7. What's more, our products have passed a series of rigorous drop tests, shock & vibration tests and thermal tests, ensuring they can survive in any kind of road trips or event environment.

MODULAR

Inputs

Dual 4K HDMI2.0/DP1.2 Input Card

2x DP 1.2
2x HDMI 2.0

- DP 1.2: HDCP 1.3 compliant
  - Up to 4096×2160@60Hz/8192×1080@60Hz 4:4:4 10-bit
- HDMI 2.0: HDCP 2.2 and HDCP 1.4 compliant
  - Up to 4096×2160@60Hz 4:4:4 8-bit
- Only one of the HDMI 2.0 or DP 1.2 can run simultaneously with that in the other parallel group (Group 1: Connectors 1 & 2. Group 2: Connectors 3 & 4)
- Capacity switching between SL, DL and 4K
- EDID management for VESA, and CVT compliant user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz
  - 3840×1080p@30/50/59.94/60Hz
  - 3840×2160p@30/50/59.94/60Hz

12G-SDI Input Card

2x 12G-SDI or 4x 3G-SDI or 1x 12G-SDI + 2x 3G-SDI

- 12G-SDI:
  - Downward compatible with 6G-SDI, 3G-SDI, HD-SDI and SD-SDI
  - Connectors 1 and 3 are available
- 3G-SDI:
  - Downward compatible with HD-SDI and SD-SDI
  - Four connectors are available
- Deinterlacing by default
- Common resolutions
- 12G-SDI:
  - 720×480i@59.94Hz
  - 720×576i@50Hz
  - 1920×1080i@50/59.94/60Hz
  - 3840×2160p@23.98/24/25/29.97/30/50/59.94/60Hz
- 3G-SDI:
  - 720×576i(PAL)@50Hz
  - 720×480i(PAL)@59.94Hz
  - 1920×1080i@50/59.94/60Hz

NEW RELEASE

HDMI1.4 Quad Input Card

4x HDMI1.4

- HDCP 1.4 compliant
  - SL: Up to 2048×1080@60Hz 4:4:4 8-bit
  - DL: Up to 3840×1080@60Hz 4:4:4 8-bit
- EDID management for VESA, and CVT compliant user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz
  - 3840×1080p@30/50/59.94/60Hz

3G-SDI Quad Input Card

4x 3G-SDI

- Downward compatible with SD-SDI and HD-SDI
- Bi-level at SD and Tri-level at HD
- Deinterlacing by default
- Support for SMPTE 425-1, 2048-2, 296M, 292M and 259M
- Common resolutions
  - 720×576i(PAL)@50Hz
  - 720×480i(PAL)@59.94Hz
  - 1920×1080i@50/59.94/60Hz

DP1.1 Quad Input Card

4x DP 1.1

- HDCP 1.3 compliant
  - SL: Up to 2048×1080@60Hz 4:4:4 8-bit
  - DL: Up to 3840×1080@60Hz 4:4:4 8-bit
- EDID management for VESA, and CVT compliant user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz
  - 3840×1080p@30/50/59.94/60Hz

HDMI1.3 Quad Input Card

4x HDMI 1.3

- HDCP 1.4 compliant
  - Up to 2048×1080@60Hz 4:4:4 8-bit
- EDID management for VESA, and CVT compliant user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz

Outputs

3G-SDI Quad Output Card

4x 3G-SDI

- Downward compatible with HD-SDI and SD-SDI
- Support for ST-424 (3G), ST-292 (HD) and SMPTE259 SD
- Under 1920×1080@50/59.94/60Hz, Level A and Level B adjustment supported
- Support for interlaced signal output
- Support for output timing settings
- Connector copying supported
  Connectors 2 and 4 are active, while connectors 1 and 3 copy the outputs on connectors 2 and 4 respectively
- Common resolutions
  - 720×480i (NTSC)@59.94Hz
  - 720×576i (PAL)@50Hz
  - 1280×720p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080i@50/59.94/60Hz

NEW RELEASE

HDMI1.3 Quad Output Card

4x HDMI 1.3

- HDCP 1.4 compliant
  - Up to 2048×1080@60Hz 4:4:4 8-bit
  - Max. output width: 2048 pixels
  - Max. output height: 2048 pixels
- Connectors 2 and 4 are active, while connectors 1 and 3 copy the outputs on connectors 2 and 4 respectively
- Support for VESA/CVT and user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz

12G-SDI Output Card

1x 12G-SDI or 4x 3G-SDI

- 12G-SDI:
  - Downward compatible with 6G-SDI, 3G-SDI, HD-SDI and SD-SDI
  - Connectors 1 is available, while connector 2 copies the output on connector 1
  - Connectors 3 and 4 are unavailable
  - Support for ST-2082(12G), ST-2081 (6G), ST-424 (3G), ST-292 (HD) and ST-259 (SD)
  - Max. resolution: 4096×2160@60Hz
- 3G-SDI:
  - Downward compatible with HD-SDI and SD-SDI
  - Four connectors are available and work as 3G-SDI connectors
  - Support for ST-424 (3G), ST-292 (HD) and ST-259 (SD)
  - Max. resolution: 1920×1080@60Hz
- Level A and Level B adjustment NOT supported
- Support for interlaced signal output
- Support for output timing settings
- Common resolutions
- 12G-SDI:
  - 720×480i (NTSC)@59.94Hz
  - 720×576i (PAL)@50Hz
  - 1280×720p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080i@50/59.94/60Hz
  - 2048×1080p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 3840×2160p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 4096×2160p@23.98/24/25/29.97/30/50/59.94/60Hz
- 3G-SDI:
  - 720×576i (PAL)@50Hz
  - 720×480i (NTSC)@59.94Hz
  - 1280×720p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080i@50/59.94/60Hz
  - 1920×1080p@23.98/24/25/29.97/30/50/59.94/60Hz

NEW RELEASE

4K HDMI2.0/OPT Output Card

2x HDMI 2.0
4x 10G OPT

- HDMI 2.0: HDCP 2.2 and HDCP 1.4 compliant
  - Up to 4096×2160@60Hz 4:4:4 8-bit
  - DL and 4K output supported
- DL:
  - Max. output width: 4096 pixels
  - Max. output height: 4096 pixels
- 4K:
  - Max. output width: 8192 pixels
  - Max. output height: 7680 pixels
  - HDMI 2 copies the output on HDMI 1
- OPT 1 and OPT 2 copy the output on HDMI 1.
- OPT 3 and OPT 4 copy the output on OPT 1 & OPT 2.
- Support for VESA/CVT and user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz
  - 2048×1080p@30/48/50/59.94/60Hz
  - 3840×1080p@30/50/59.94/60Hz
  - 3840×2160p@30/50/59.94/60Hz

HDMI1.4 Quad Output Card

4x HDMI 1.4

- HDCP 1.4 compliant
- Support for single link (default) and dual link output
- SL:
  - Up to 2048×1080@60Hz 4:4:4 8-bit
  - Max. output width: 2048 pixels
  - Max. output height: 2048 pixels
  - Connectors 1, 2, 3 and 4 are all active
- DL:
  - Up to 3840×1080@60Hz 4:4:4 8-bit
  - Max. output width: 4096 pixels
  - Max. output height: 4096 pixels
  - Connectors 2 and 4 are active, connectors 1 and 3 copy the output on connectors 2 and 4
- Support for VESA/CVT and user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz
  - 2048×1080p@30/48/50/59.94/60Hz
  - 3840×1080p@30/50/59.94/60Hz

AUX

AUX HDMII Output Card

4x HDMI 1.3

- HDCP 1.4 compliant
  - Up to 2048×1080@60Hz 4:4:4 8-bit
  - Max. output width: 2048 pixels
  - Max. output height: 2048 pixels
- Support for VESA/CVT and user timings
- Common resolutions
  - 1920×1080p@30/48/50/59.94/60Hz

More Cards
We offer more DVI cards for your choice, including **SL-DVI Quad Input Card**, **DVI (HDMI1.4) Quad Output Card**, **DVI (HDMI1.4)/OPT Output Card**, **SL-DVI Quad Output Card** and **AUX SL-DVI Output Card**. If you need more details about these cards, please contact us.

Caution
All the cards can be only installed into the designed slots. Installing a card into an incorrect slot will cause device failure.

Key Features

- Based on Apollo pure FPGA architecture
- True 4K60p 4:4:4 10 bit video processing
- Modular design through removable and field-swappable I/O cards, power supplies and main control card
- Abundant I/O cards to provide a variety of connectivity possibilities
- Up to 32x 2K60p inputs and 32x 2K60p outputs
- Up to 64x SL mixing layers, 32x DL mixing layers or 16x 4K mixing layers
- Cross-connector layer does not occupy layer resources, full screen roaming
- Flexible layer management, including mask and border, flipping, copying and mirroring
- BKG and LOGO management
- Luma key and chroma key, DSK
- Cut and fill
- 2x Multiviewer outputs with flexible layouts, adjustable borders and UMD
- Input and PGM view on an auxiliary output
- Input sync with Genlock; Genlock accepts bi-level or tri-level signals
- Live input view in Triton
- Custom timing and frame rates on outputs
- AOI function
- Input EDID management
- Custom layout of output connectors
- Output connector copying
- Output mapping to enable easier screen configuration
- Batch change of frame rates of output connectors
- Full-link HDCP for safer content transmission
- U3 event controller, PC and Stream Deck control
- Multiple F series devices controlled by a single U3 simultaneously
- HDR10, HLG and SDR
- Multiple backup mechanisms, device diagnostics, log export and power failure alarm for super stability and reliability
- Advanced adjustments of brightness, contrast and test patterns
- Layer resources monitoring
- Project file for data backup and restore
- Support for virtual pixels
- Auto report on input and output statuses
- Clear indication of sync signal statuses

Technical Features

Inputs

- Up to 32x inputs through 8x input cards
- Standard, custom and advanced EDID settings
  Common resolutions: 1920×1080p@60Hz, 3840×1080p@60Hz and 3840×2160p@60Hz, etc.
- Input source deinterlacing processing
- Input source cropping
- Status LED indicators provided for easy troubleshooting

Outputs

- Up to 32x outputs through 8x output cards
- Standard, custom and advanced output timing settings
- Output width can be up to 8192 pixels, better choice for LED applications
- Status LED indicators provided for easy troubleshooting

Multiviewer Outputs

- Two dedicated output connectors configured as Multiviewer connectors, with a fixed resolution of 1920×1080p@60Hz
- Monitor all inputs and screens (PVW and PGM)
- Customizable layouts for easy use
- UMD display and color adjustment
- Multiviewer background color adjustment
- Border adjustment for Multiviewer windows

Screens

- Outputs configured as single screens or edge-blended widescreens
- Bezel compensation and edge blending
- Irregular screen mosaic and output AOI function, ideal for complex and irregular LED screen applications
- Dedicated BNC with loop-through for Genlock to ensure a synchronized output
- Virtual pixels supported
- Up to 128 presets

AUX

- AUX screens supported
  AUX connector can be in independent or mosaic use
- AUX screen can follow the preset switching
- Free view of inputs and screens (PGM)

Transition and Effect

- Cut and fill
- Luma key and chroma key, DSK
- Cut and fade transitions
- Customizable transition durations
- PVW to PGM via Take, Cut or T-bar operation
- Copy or swap display on PVW and PGM

Layers

- Each output card supports up to 8x SL mixing layers, 4x DL mixing layers or 2x 4K mixing layers
- Full screen roaming supported
- Fade and cut transitions on all layers
- Adjustable layer mask and border with different border effects
- Layer flipping, copying and mirroring
- Pure color layer can be used as background

BKG & LOGO

- BKG can be either a captured or imported image
- Unlimited BKG quantity in 512 MB storage space
- Imported LOGO images supported
- Independent BKG and LOGO for each screen
- BKG filling the whole screen by default

Processing

- PIXELHUE high-quality scaling engine
- Low latency processing
- Compatible with HDCP 1.4 and HDCP 2.2
- Compliant with HDR
- Bezel compensation

Control

- Intuitive control via U3 event controller
- Multiple control modes via U3 event controller, control PC and Stream Deck

Others

- Free conversion between HDR10, HLG and SDR
- User keys (containing layer properties such as size, position, border color, etc.) for more convenient and fast layer properties configuration

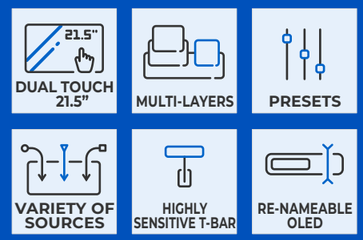
MODELS

PIXELHUE

	F8	F4	F4 Lite
Input Card Slots	8	8	8
Output Card Slots	8	6	6
AUX Card Slots	1	1	1
Layers *(No Multiviewer)*	64x SL mixing layers, 32x DL mixing layers, or 16x 4K mixing layers	48x SL mixing layers, 24x DL mixing layers, or 12x 4K mixing layers	40x SL mixing layers, 20x DL mixing layers, or 10x 4K mixing layers
Multiviewer Connectors	2	2	2
Input View	Via Ethernet cable	Via Ethernet cable	Via DVI/HDMI cable
Presets	128	128	128
BKG Storage	512 MB	512 MB	512 MB
LOGO	16	16	16
Control	**Triton** GUI-based event management software designed for the F series **U3** Large-scale event controller engineered for the F series		
Processing	FPGA-based Apollo image processing architecture Real 4K60p 4:4:4 8-bit video processing		
Front Screen	7" Touchscreen	7" Touchscreen	3.5" LCD
Ethernet Port	100M	100M	100M
Dimensions	Without handles, rack ears & rack mount L 482.6 × P 515.5 × H 354.9 mm W 19 × D 20.3 × H 14 inches With handles, rack ears & rack mount L 482.6 × P 543.5 × H 361.4 mm W 19 × D 21.4 × H 14.2 inches	Without handles, rack ears & rack mount L 482.6 × P 513 × H 212.2 mm W 19 × D 20.2 × H 8.4 inches With handles, rack ears & rack mount L 482.6 × P 546.5 × H 228.2 mm W 19 × D 21.5 × H 9.0 inches	Without handles, rack ears & rack mount L 482.6 × P 513 × H 212.2 mm W 19 × D 20.2 × H 8.4 inches With handles, rack ears & rack mount L 482.6 × P 546.5 × H 228.2 mm W 19 × D 21.5 × H 9.0 inches
Weight	Fully loaded without accessories 39.1 kg / 86.2 lbs Fully loaded with accessories & flight case 67.5 kg / 148.8 lbs	Fully loaded without accessories 30.3 kg / 66.8 lbs Fully loaded with accessories & flight case 50.3 kg / 110.9 lbs	Net weight without accessories 25 kg / 55.12 lbs Shipping weight with accessories 50 kg / 105.82 lbs
Electric Parameters	Power connector: 100–240V~, 50/60Hz, 10A–5A Max power consumption: 700 W	Power connector: 100–240V~, 50/60Hz, 10A–5A Max power consumption: 600 W	Power connector: 100–240V~, 50/60Hz, 10A–5A Max power consumption: 450 W
Noise on Average *(@1, 0.75m height)*	55 dB	53 dB	53 dB
Operating Temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C
Operating Humidity	0% to 85%, non-condensing	0% to 80%, non-condensing	0% to 80%, non-condensing
Certifications	CE, FCC, IC, RoHS	CE, FCC, IC, RoHS	CE, FCC, IC, RoHS
Packing Information	1x Grounding cable 1x Ethernet cable 1x USB cable 1x USB drive 1x Philips screwdriver 2x Power cords (Optional) 1x Flight case (Optional) 1x Quick Start Guide 1x Customer Letter 1x Safety Manual 1x Certificate of Approval	1x Grounding cable 1x Ethernet cable 1x USB cable 1x USB drive 1x Philips screwdriver 2x Power cords (Optional) 1x Flight case (Optional) 1x Quick Start Guide 1x Customer Letter 1x Safety Manual 1x Certificate of Approval	1x Grounding cable 1x Ethernet cable 1x USB cable 1x USB drive 1x Philips screwdriver 2x Power cords (Optional) 1x Flight case (Optional) 1x Quick Start Guide 1x Customer Letter 1x Safety Manual 1x Certificate of Approval

U3

Live Event Console



The U3 is a live event controller developed by PIXELHUE. With integrated intelligent, high-performance event management software Triton, the U3 is capable of receiving, processing, and monitoring multiple inputs and outputs at your fingertips.

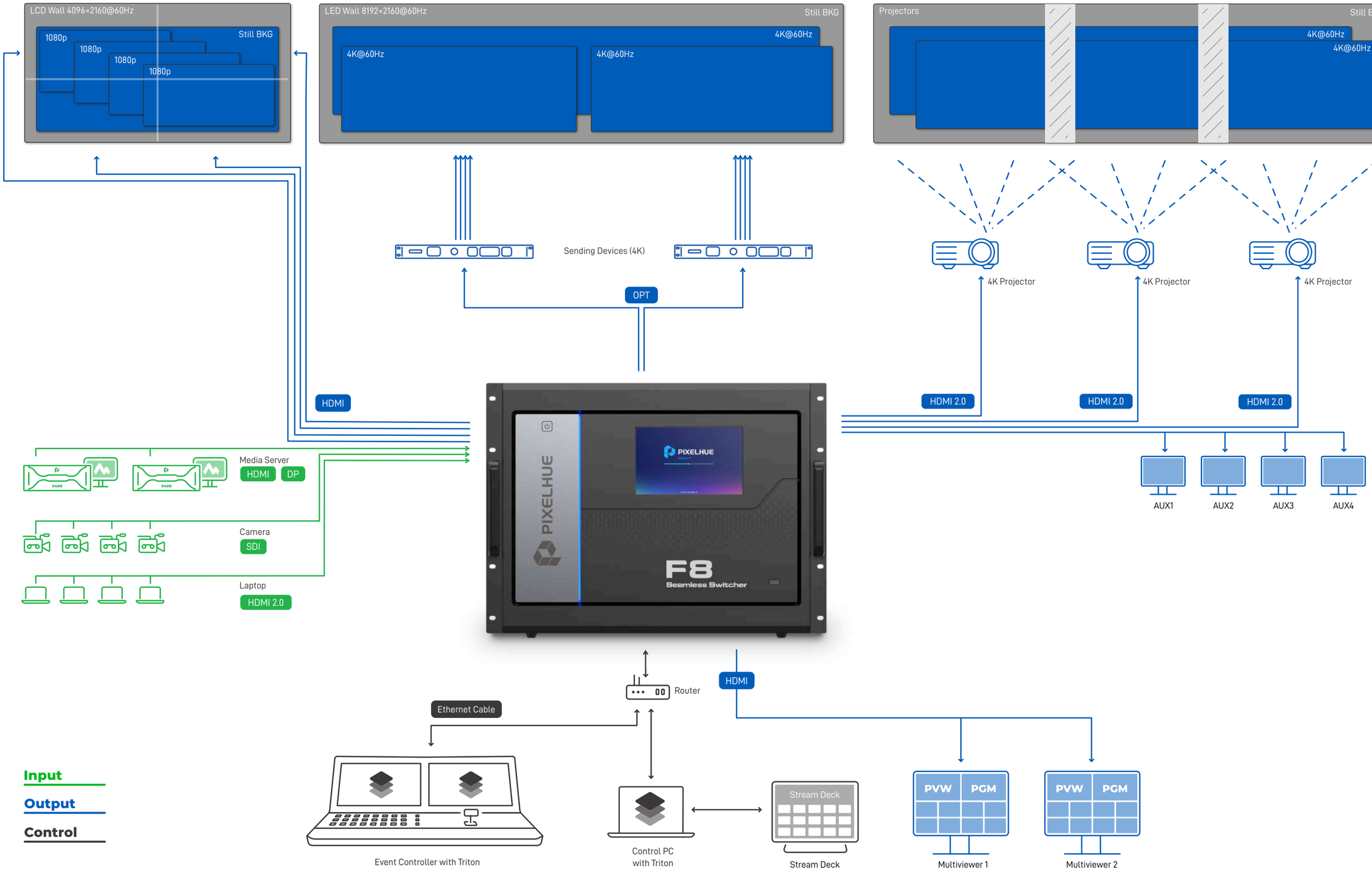
The U3 can simultaneously control up to eight Flex-View Event Presentation Switchers to realize synchronized operations on multiple switchers, greatly simplifying your on-site deployment and bringing more convenience and ease to your event.

The U3 undoubtedly has become an ideal video operating tool for a wide range of events today, such as large live conferences, various interactive live shows, music tours, and immersive art exhibitions.

PIXELHUE

- Stand-alone controller with Pixelhue's built-in high-performance Triton event management software, taking full control over seamless switchers in a more stable, fast and convenient way
- Simultaneous control over up to 8 switchers
- 2 × 21.5" full HD touch screens with multi-touch interface
- The secondary touch screen can also be used as MVR, to minimize additional monitor for preview
- Real-time input view via DVI or Ethernet connector
- High-performance T-bar for transition control & mixing
- Customizable OLED labels above the buttons for displaying user-defined functions
- Dedicated buttons for smooth operation of functions like adding/editing screens, FTB, freeze, and matching PGM
- Dedicated buttons for adding/editing layers and layer arrangement
- Dedicated preset buttons for saving, clearing, and loading presets with user-defined information on the OLED labels
- Dedicated numeric buttons for easy editing
- User-adjustable script lights, front light, and Logo lights
- Clearly-defined button indicators, various statuses at a glance
- User-friendly GUI for adjusting operational properties like resolution and sizing
- USB ports for additional accessories such as a mouse, keyboard, and USB drive
- Dual redundant power supply design
- Dust cover included

APPLICATION



X MARKS THE FUTURE

PIXELHUE

X400/X200 Media Server

X Series

EDGE BLENDING

TIMELINE

HDMI / DP

EDID LOCK

Genlock

XLR AUDIO

8K

Neutrik 10G

UNLIMITED LAYERS

Realtime PreEdit

NDI

SLICE FUNCTION

Superior Performance

The X series are professional media servers engineered by PIXELHUE. Equipped with Intel's latest-generation processor, high-performance server class motherboard and graphics card, multiple input and output cards, the X series can drive up to 6x 4K or 24x 2K outputs (X400) or 2x 4K outputs (X200) from a single server unit, thus delivering unprecedented high performance to your various large-scale events today.

Built on the advanced graphics card to offer remarkable hardware-decoding and rendering capabilities, the X series easily realize the hardware-decoding of 8K@60fps UHD videos and simultaneous smooth playback of multiple 4K@60fps videos. With the support for abundant video decoding formats, the X series media servers become the unparalleled video playback and processing solution for stage performances, large-scale conferences, immersive exhibitions and more creative display applications.

Stable and Reliable Control (X400)

Employing dual high-speed SSD with dual OS, dual authorization mechanism and modular design, the X400 is undoubtedly the most robust and heavy-duty solution for mission-critical applications. Moreover, on-site playback and control are always stable thanks to dual redundant configuration and seamless switching guaranteed by the frame sync technology. Extra alarm and diagnostics functionalities further help to safeguard your live events.

SSD MAIN

SSD BACKUP

Professional Media Processing

The X series media servers offer first-class media processing capability and are capable of processing a wide variety of media and video streams.

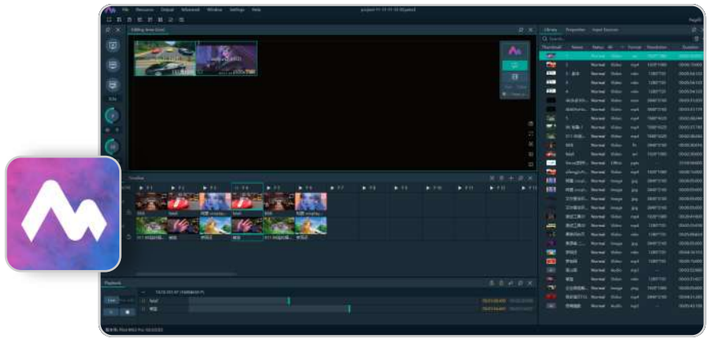
- H.263, H.264, H.265 (HEVC)
- VP6, VP7, VP8, VP9
- HAP, HAP-Alpha
- VC1
- AV1, AVS
- ProRes
- rv10, rv20, rv30, rv40
- WMV1, WMV2, WMV3
- MPEG1, MPEG2, MPEG4, MJPEG
- JPEG2000, JPEG, TIFF, BMP, GIF, PNG, PSD

Pilot MS3 Unleash All Your Creativity

The X series media servers come equipped with the Pilot MS3 Pro multimedia playback software, perfect for bringing your creative ideas to life. It supports innovative slices, ultra-wide videos, and flawless pixel-to-pixel displays, enabling dazzling visual effects for spectacles or live events, and allowing you to fully unleash your creativity. With geometric correction, projector edge blending, and timeline management functions, alongside features like live and pre-edit modes, unlimited layers and programs, program jumping and media collection playback, customized cross-program playback, image quality adjustments, and crossfade effects, you'll have powerful tools to easily and flexibly manage and control your event displays.

UI Customized by Your Performance

Elaborate visualized design makes your operations convenient and the GUI can be customized by your preference. The media, inputs, layers, slices, real-time output preview and playback progress are all intuitive. You can see what the output will look like while the program is being edited. All our design considerations focus on shortening your learning curve and bringing you the maximum ease of use.



Excellent Flexibility Through Modular Design (X400)

The X400 is designed with 2 input card slots and 6 output card slots and can support up to 2x 4K input cards and 4x 4K output cards simultaneously, allowing you to easily select the desired I/O modules with various input and output connectors to satisfy your visual system requirements. The modular and plug-in design also facilitates easy deployment and upgrade in the field, bringing more convenience and ease to your on-site applications.

Key Features

Software

- Separate live and pre-edit working modes, reliable support for live events
- Playback and real-time editing of all categories of media, including videos, pictures, audio, web pages, PowerPoint documents, acquisition devices and NDI inputs
- Various playback modes, including single programm media and jump playback
- Unlimited layers and unlimited programs
- Innovative slices for diversified visual applications
- Visualized management of stage, timeline, programs, slices, various media, input sources and playback progress
- Flexible output segmentation, irrgular slices, layer mapping, edge blending and super-large display and more, fully realize your creative ideas
- Tailor your UI instantly: Save and access layouts with ease
- Automatic software startup, restart, shutdown and program playback, bring intelligent unattended and automated management
- Auto preview and preview editing of next program
- Media optimization for better media performance
- Media image quality adjustment
- Media flipping, stretching, cropping supported
- Crossfade and cut effects on program switching
- Decoding of various mainstream video formats
- Output mapping and identification for clear screen and connector correspondence
- Project file management and packaging
- Peripheral control and shortcut management, and more powerful features on the way

Hardware

- 8K or multiple 4K hardware decoding and rendering for smooth playback and flawless output
- Plug-in and modular design for higher system stability (X400)
- Frame sync technology for synchronized and smooth display (X400)
- Seamless primary and backup device switching safeguards your on-site operation (X400)
- Infinite device cascading, synchronized by Genlock (X400)
- EDID lock, ensuring no jump of connector resolution and display sequence
- Intelligent thermal solution
- Running status indication and fault alarm on front panel display (X400)
- High quality XLR audio inputs and outputs
- Remote or central control via TCP/UDP protocol
- Pass stress and stability tests
- Rack mountable chassis
- Industrial ruggedized design

Interactive UI

- Fully-visualized and friendly graphical UI, what you see is what you get
- Customizable graphical UI layout
- UI lock for safer unattended operation

Technical Features

Capability

- Smooth playback of 1x 8K4K@60fps video, 4x 4K2K@60fps / 6x 4K2K@30fps videos, or 15x 2K1K@30fps videos (X400)
- Smooth playback of 1x 8K2K@60fps video or 2x 4K2K@60fps videos (X200)
- Unlimited layers and slices

Outputs

- 8192×1080@60Hz/4096×2160@60Hz or 2048×1152@60Hz output cards, up to 6x 4K or 24x 2K outputs (X400)
- Up to 2x 4K2K@60Hz outputs via 2x HDMI 2.0 and 1x DP 1.2 (X200)
- 4:4:4 10-bit color sampling (X400)
- Genlock and frame sync card (X400)

Inputs

- 1920×1200@60Hz or 4096×2160@30Hz input card, up to 4x 2K or 4x 4K inputs (X400)
- Up to 2x 4K2K@30Hz inputs via 2x HDMI 1.4 (X200)
- NDI, streaming media and web page inputs

Audio

- XLR audio (1x AUDIO IN, 1x AUDIO OUT L, 1x AUDIO OUT R) and 1x 3.5 mm audio input, 1x 3.5 mm audio output (X400)
- XLR audio (1x AUDIO OUT L, 1x AUDIO OUT R) and 1x 3.5 mm MIC, 1x 3.5 mm LINE IN, 1x LINE OUT (X200)
- Formats: mp3, aac, flac, amr, ape, wav, wma, ogg

Control

- Built-in Pilot MS3 Pro Multimedia Playback Software
- Remote and central control via TCP/UDP protocol
- 1x HDMI 1.4 connector for software UI
- 2x USB on front panel, 4x USB on rear panel (X400)
- 2x USB3.0 on front panel, 2x USB3.0 and 2x USB2.0 on ear panel (X200)

MODULAR

Input Card

4K Input Card

X_2x12G SDI_LOOP Input Card

- 4x 12G-SDI (including 2x loop)
  - Downwards compatible with 6G-SDI and 3G-SDI
  - Max. resolution of a single connector: 4096×2160@60Hz
  - Max. output width: 4096@60Hz; Max. output height: 4096@60Hz

4K Input Card

X_2xHDMI1.4 Input Card

- 2x HDMI 1.4
  - Downwards compatible with HDMI 1.3
  - Max. resolution of a single connector: 4096×2160@30Hz
  - Max. output width: 4096@30Hz; Max. output height: 4096@30Hz
  - 2x 4096×2160@30Hz inputs simultaneously
  - HDCP 2.2 compliant

2K Input Card

X_1x3G-SDI+1xDVI Input Card

- 1x DVI
  - Max. resolution: 1920×1200@60Hz
  - Max. output width: 1920@60Hz; Max.output height: 1920@60Hz
  - Min. resolution: 800×600@60Hz
  - Interlaced signal inputs supported
- 1x 3G-SDI
  - Downwards compatible with HD-SDI and SD-SDI
  - ST-424 (3G), ST-292 (HD) and SMPTE 259 (SD) standard video inputs
  - Max. resolution: 1920×1080@60Hz
  - Max. output width: 1920@60Hz; Max. output height: 1920@60Hz
  - Interlaced signal inputs supported

Output Card

4K Output Card

X_1xDP1.2+1xHDMI2.0 Output Card

- 1x HDMI 2.0
  - Max. output width: 8192@60Hz; Max.output height: 7680@60Hz
- 1x DP 1.2
  - HDMI 2.0 and DP 1.2 output the same content
  - Max. output resolution: 8192×1080@60Hz/4096×2160@60Hz
  - Max. output width: 8192@60Hz; Max. output height: 7680@60Hz
  - HDCP 2.2 compliant
  - Mosaic output of multiple same-type connectors

2K Output Card

X_4x3G SDI Output Card

- 4x 3G-SDI
  - Downwards compatible with HD-SDI and SD-SDI
  - ST-424 (3G), ST-292 (HD) and SMPTE 259 (SD) standard video outputs
  - Max. output resolution: 2048×1080@60Hz
  - Max. output width: 2560@60Hz; Max. output height: 2560@60Hz
  - 4x SDI mosaic outputs with 2×2 layout (>2K output) or 4x copy outputs (<2K output)

2K Output Card

X_4xHDMI Output Card

- 4x HDMI 1.3
  - Max. output resolution of a single connector: 2048×1152@60Hz
  - Max. width: 2560 pixels (2560×972@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
  - 4x HDMI mosaic outputs with 2×2 layout

Sync Card

X_2xRJ45+2xGenLock Sync Card

- 2x RJ45
  - Receive frame sync lock signals (Framelock)
- 2x Genlock
  - Receive and loop through sync lock signals (Genlock)

Caution

All the cards can be installed into the designed slots only. Installing a card into an incorrect slot will cause device failure.

Specifications in this datasheet are subject to change without prior notice.

APPLICATIONS

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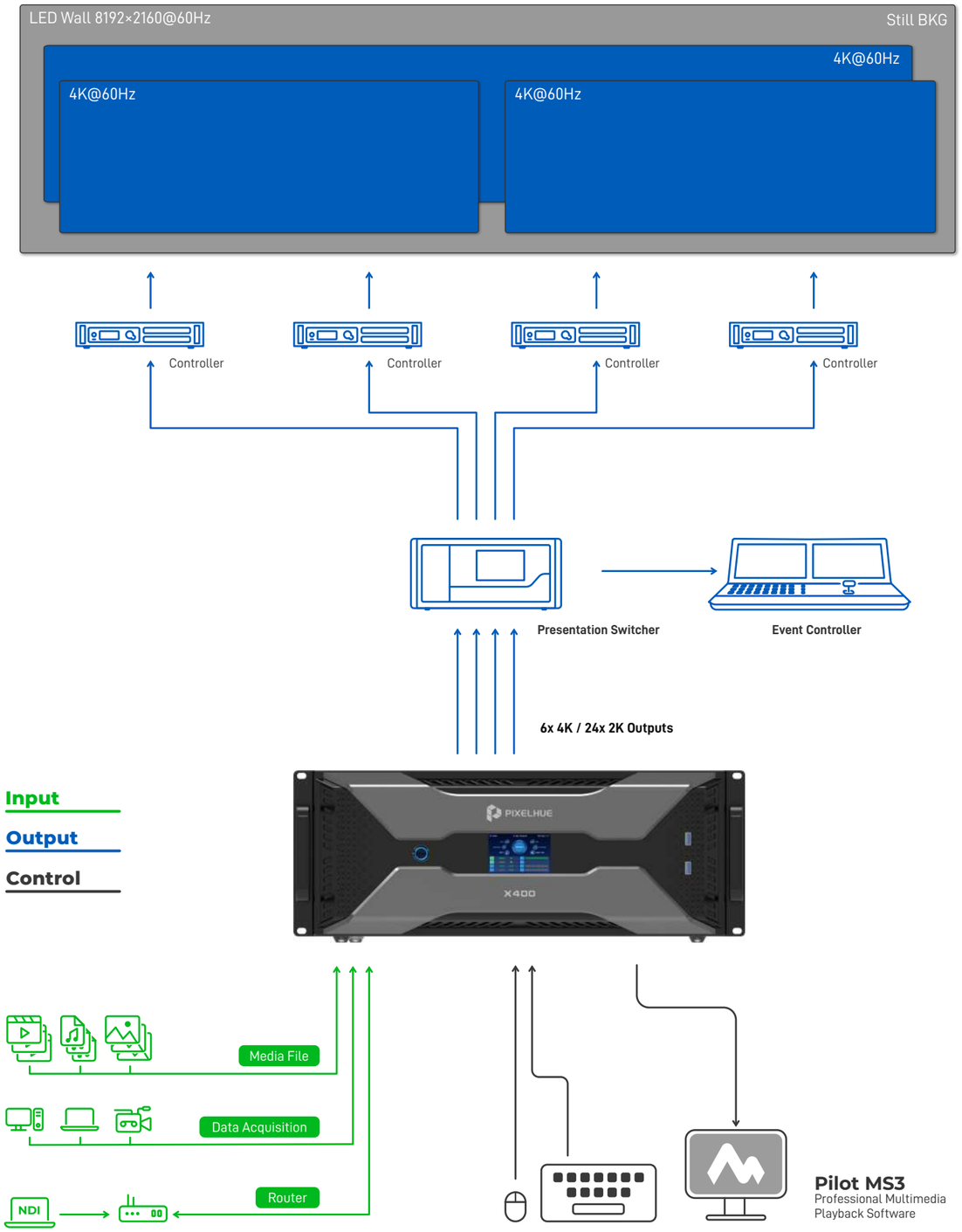
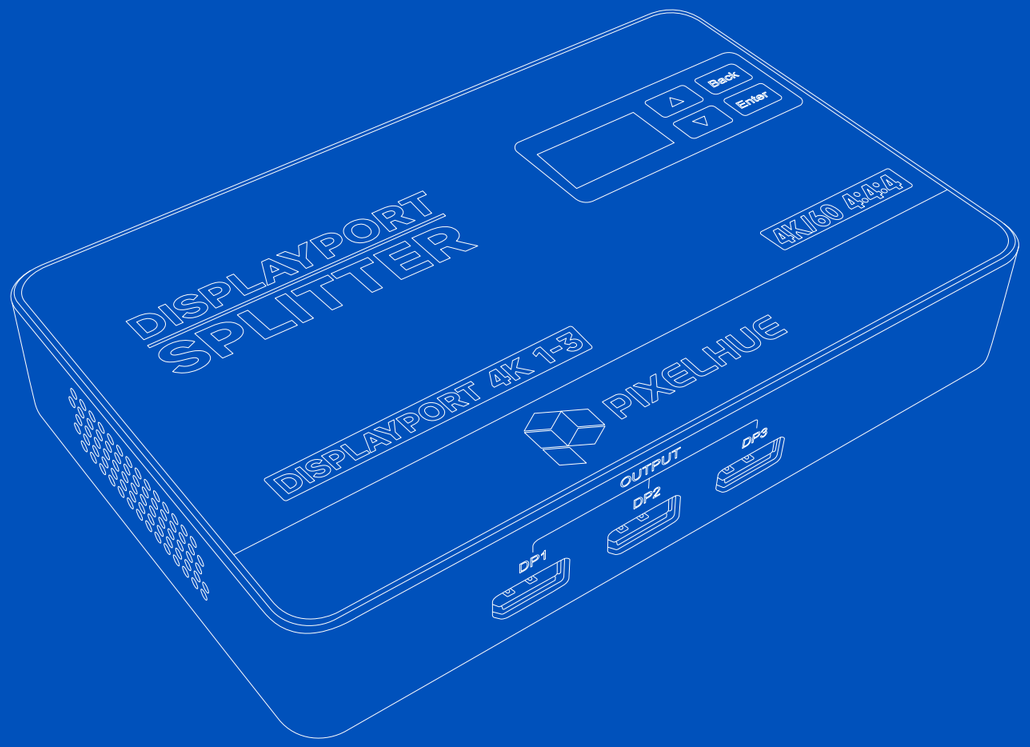


imagine *beyond*
reality

EXTENDER
SPLITTER



Converter & Extender & Splitter

PIXELHUE

Fiber Extender
EP4T/R

The EP4T/R fiber extender employs advanced fiber optic technology for flawless, long-distance video and audio transmission via optical fiber, surpassing traditional cable limitations.

Featuring 8-bit/10-bit lossless compression, the EP4T/R offers unparalleled video signal quality (4Kx2K@60Hz), ensuring a stunning visual experience. Its compact, plug-and-play design simplifies installation, allowing seamless signal extension without hassle.

Versatile and reliable, the EP4T/R is perfect for home theaters, conference rooms, and monitoring centers, delivering stable HD video over extended distances for both commercial and personal applications.

Features

- Ultra-HD quality with lossless, long-distance transmission
- Robust anti-interference guarantees stable connection and transmission
- Perfect pairing with PIXELHUE products, forming a comprehensive link solution
- Effortless device monitoring with clear signal indicators
- HDR and 3D video passthrough
- KVM roaming

Fiber Extender

EP2

The EP2 fiber extender employs advanced fiber optic technology for flawless, long-distance video and audio transmission via optical fiber, surpassing traditional cable limitations.

Featuring 8-bit/10-bit lossless compression, the EP2 offers unparalleled video signal quality (4Kx2K@60Hz), ensuring a stunning visual experience. Its compact, plug-and-play design simplifies installation, allowing seamless signal extension without hassle.

Versatile and reliable, the EP2 is perfect for home theaters, conference rooms, and monitoring centers, delivering stable HD video over extended distances for both commercial and personal applications.

Features

- Dual functionalityTX (Transmitter) and RX (Receiver) combined into one, reducing signal conversion for higher system robustness and overall cost-effectiveness
- Signal conversion and extended transmission within one compact box
- Ultra-HD quality with lossless, long-distance transmission
- Flexible HDMI and DP bidirectional signal conversion
- Reliable optical fiber ensures signal integrity over long distances
- Robust anti-interference guarantees stable connection and transmission
- Backup and copy output, ensuring more reliable backup solution
- A multiviewer provided for signal monitoring
- Perfect pairing with PIXELHUE products, forming a comprehensive link solutionv
- Compatible with single-mode (SM) and multi-mode (MM) optical fibers
- Effortless device monitoring with clear signal indicators
- EDID passthrough for compatibility with diverse devices
- Encrypted data transmission
- KVM roaming
- User-friendly design, plug and play

HDMI2.0 to Fiber
HDMI Optical Module

HDMI2.0 to Fiber

The HDMI optical module solves various problems such as stability, compatibility and distance limitation when transmitting signals over HDMI cables. Using wavelength division multiplexing technology (WDM), the module adopts multimode single-core fiber optic patch cable, enabling simple installation and easy maintenance to meet the requirements of different application scenarios.

The HDMI optical module is the latest uncompressed single-fiber audio and video interconnection solution on the market, which is mainly used to transmit high-definition videos and audios between the players and computers that have HDMI connectors and HDTVs, monitors, projectors with HDMI connectors.

Features

- Adopt wavelength division multiplexing technology, enabling a single multimode fiber to achieve high-definition video and audio transmission
- HDMI transparent transmission, and no protocol conversion required
- Easy to use, plug-and-play
- Support ultra-long transmission distance, and 500 m lossless transmission (OM3 fiber)
- TMDS signal transmission over a multimode fiber, with good anti-interference performance
- Low power consumption, and hot-swapping supported
- Support EDID, HDCP, CEC transparent transmission

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