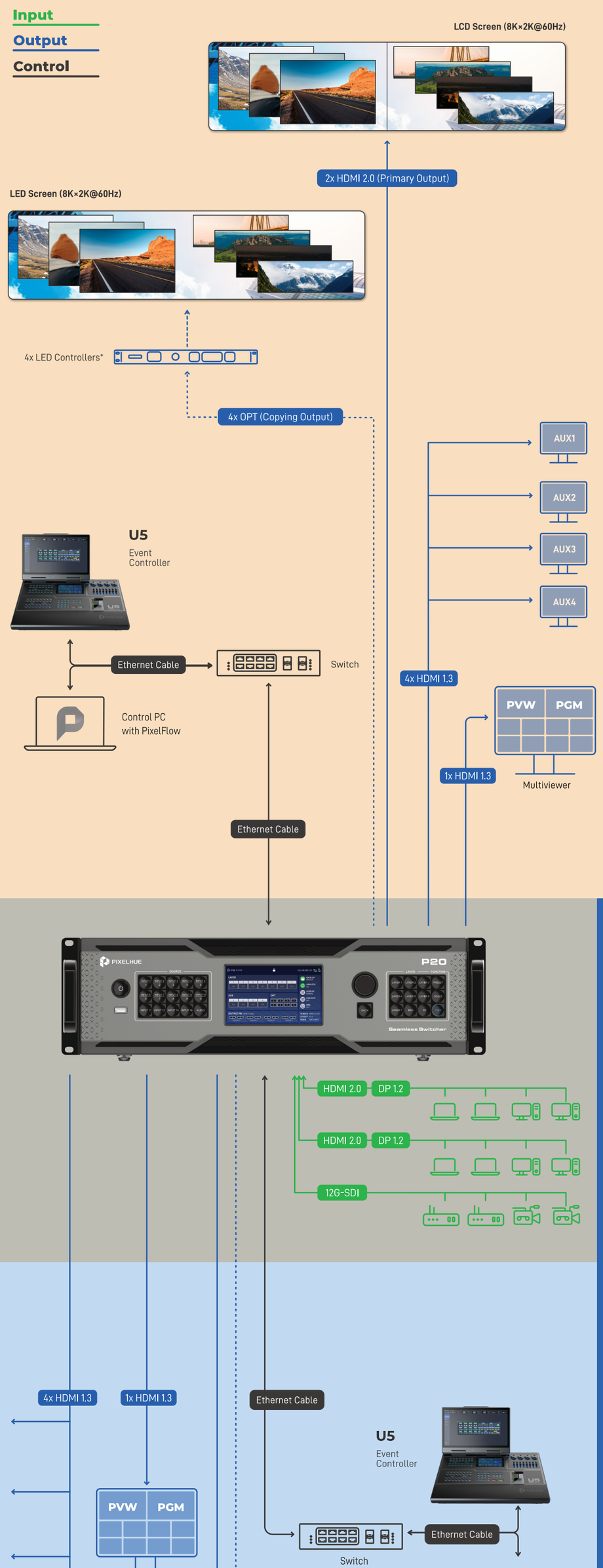
APPLICATION

www.pixelhue.com
info@pixelhue.com
+31(0)23-303 36 82
1201A, 8 Caihefang Road, Haidian District, Beijing, China

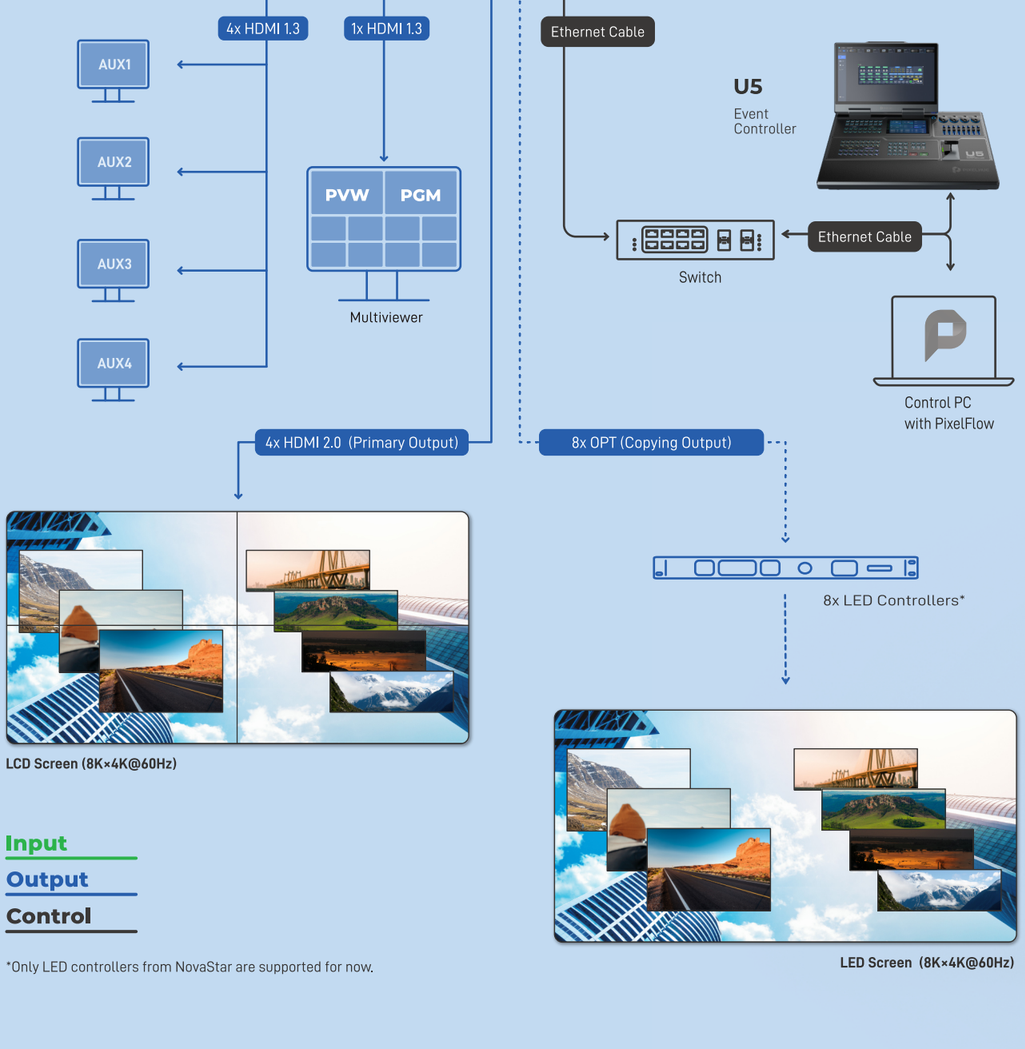
PIXELHUE



SWITCHER MODE



PGM ONLY MODE



*Only LED controllers from NovaStar are supported for now.

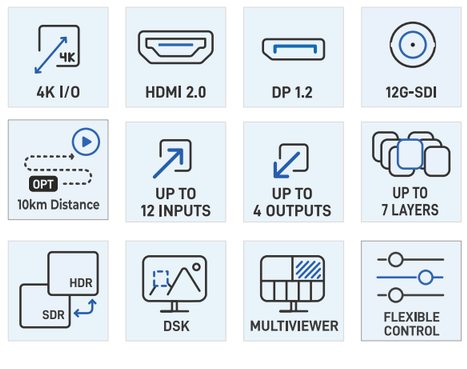
imagine *beyond* reality

PIXELHUE

P SERIES

P20/P10
4K Presentation Switchers

Ideal for Small/Medium-Sized Events



Flawless Live 4K Processing

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

The P20 and P10 can work in switcher mode or PGM only mode. In switcher mode, a single P20 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 is up to 8K×4K@60Hz and P10 is up to 8K×2K@60Hz.

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





P20

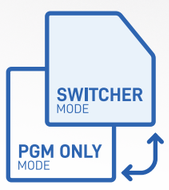
Presentation Switcher



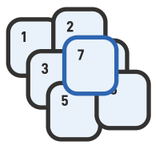
P10

Presentation
Switcher

Powerful Functionalities



The P20 and 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, flawless image mosaic, various transition effects and much more, the P20 and 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 and smooth video display maximize audience engagement.



Dual working modes make the P20 and P10 more capable, allowing users to choose switcher mode or PGM only mode according to their application requirements. The P20 supports up to 7 layers (3x 4K@60Hz layers and 4x 2K@60Hz layers, or 4x 4K@60Hz layers) and the P10 supports up to 6 layers (2x 4K@60Hz layers and 4x 2K@60Hz layers, or 3x 4K@60Hz layers). Users can freely arrange the layout of layers. Up to 128 presets are supported to satisfy different requirements. High-resolution images can be captured from live inputs and outputs and used as BKG. In addition, the P20 comes with advanced DSK capability including luma key and chroma key and allows for free conversion between SDR, HDR10 and HLG.

Longer Transmission Distance

10G optical fiber ports are provided for copying HDMI 2.0 output, allowing the P20 and P10 to transmit signals to the VX1000 or VX600 LED controller from NovaStar 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 and P10 ideal for long-distance signal transmission.

Flexible Control Options

In addition to superior performances and outstanding visual experience, the P20 and P10 are exceptionally easy to operate. Various control options are available.

- Full-featured front panel buttons and 5-inch graphical LCD
- Versatile event controller U5/U5 Pro
- All-new event management software PixelFlow

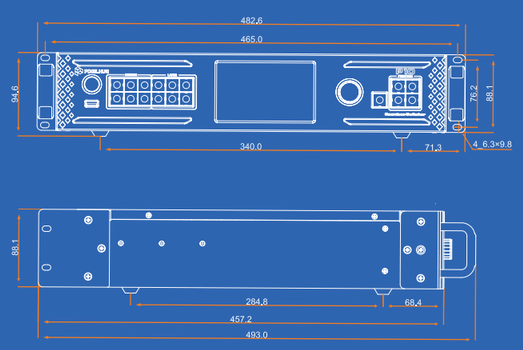
Superb Stability & Reliability

The P20 and P10 are created for applications requiring the highest stability and uptime. Different backup methods are supported, including input source backup, automatic output backup and device 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.

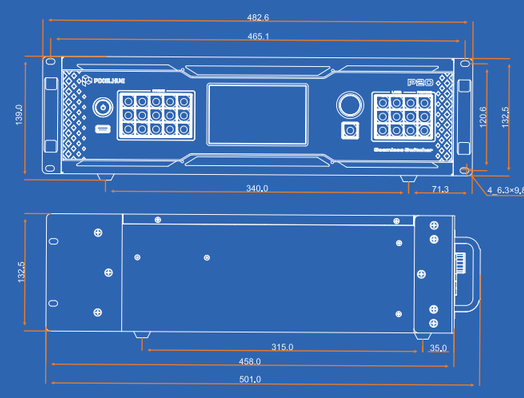
What's more, the products have passed a series of rigorous drop tests, shock & vibration tests and thermal tests, ensuring the products can survive in any kind of road trip or event environment.

Dimensions

P10



P20



Unit: mm

MODELS

	P20	P10
Inputs	8x DP 1.2/HDMI 2.0 4x 12G-SDI	4x DP 1.2/HDMI 2.0 2x 12G-SDI
Outputs	8x HDMI 2.0	2x HDMI 2.0 6x HDMI 1.3
OPT Ports	8	4
*3.5 mm Audio Jacks	2x Line in & 2x Line out	2x Line in & 2x Line out
Layers	3x 4K@60Hz layers and 4x 2K@60Hz layers, or 4x 4K@60Hz layers	2x 4K@60Hz layers and 4x 2K@60Hz layers, or 3x 4K@60Hz layers
Multiviewer Connectors	1x HDMI 1.3	
AUX Connectors	4x HDMI 1.3	2x HDMI 1.3
Presets	128	
BKG & LOGO	Up to 255 BKGs & LOGOs (Maximum storage space: 512 MB)	
DSK	Luma Key & Chroma Key	N/A
Front Screen	5" LCD	
Gigabit Ethernet Ports	2	
Control	• Front panel buttons and LCD • Event controller U5/U5 Pro • Event management software PixelFlow	

*The audio function will be available after Q3 of 2023.

		P20	P10
Chassis		3 RU	2 RU
Dimensions		L 482.6 × P 501.0 × H 139.0 mm W 19.0 × D 19.7 × H 5.5 inches	L 482.6 × P 493.0 × H 94.6 mm W 19.0 × D 19.4 × H 3.7 inches
Weight	Net Weight	10.2 kg / 22.5 lbs	7.9 kg / 17.4 lbs
	With Paper Box	14.3 kg / 31.5 lbs	10.2 kg / 22.5 lbs
	With Flight Case	25.2 kg / 55.6 lbs	20.6 kg / 45.4 lbs
Electrical Parameters	Input Power	100-240V~, 3.0-1.5A, 50/60Hz	100-240V~, 3.0-1.5A, 50/60Hz
	Max Power Consumption	140 W	82 W
Noise on Average *(@1, 0.75m height)*		45.6 dB	41.9 dB
Operating Environment		Temperature: 0°C to 50°C Humidity: 0% RH to 80% RH, non-condensing	
Storage Environment		Temperature: -20°C to +60°C Humidity: 0% RH to 95% RH, non-condensing	
Certifications		FCC, IC, CE	
Packing Information		• 1x Power cable • 1x Ethernet cable • 1x HDMI cable • 1x DP cable • 1x Customer Letter • 1x Quick Start Guide • 1x Safety Manual • 1x Certificate of Approval	



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: Up to 2x 4K×2K@60Hz outputs in switcher mode and output resolution per P20 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
AUX outputs allowing auxiliary devices such as teleprompters to be connected
A dedicated Multiviewer output allowing the PGM & PVW screens and all the connected sources to be monitored from one display
2x Gigabit Ethernet ports used for control and live input view
P20: Up to 7 layers (3x 4K@60Hz layers and 4x 2K@60Hz layers, or 4x 4K@60Hz layers)
P10: Up to 6 layers (2x 4K@60Hz layers and 4x 2K@60Hz layers, or 3x 4K@60Hz layers)
Up to 128 presets
Up to 255 BKGs & LOGOs (Maximum storage space: 512 MB)
12-bit/10-bit/8-bit video sources accepted
Free conversion between SDR, HDR10 and HLG (P20 only)
Advanced DSK capability: chroma key and luma key (P20 only)
High-performance image deinterlacing
High-precision output synchronization in PGM only mode
Various transition effects: fade and cut
Custom test patterns
HDCP 1.4 and HDCP 2.2 for full-link content protection
Device backup, copying output, and input source backup to guarantee stability and reliability
Visualized live monitoring of input and output connector statuses
5-inch graphical LCD on the front panel allowing for a more intuitive user experience
Exceptionally easy to control via front panel buttons and LCD, event controller U5/U5 Pro, or event management software PixelFlow

Inputs

For an input that contains a DP 1.2 and 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: 8192 pixels (1080×8192@60Hz)
  - Maximum frame rate: 120 Hz
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 1.3 compliant
- 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: 8192 pixels (1080×8192@60Hz)
  - Maximum frame rate: 120 Hz
  - Support for HDR (P20 only)
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 compliant and downward compatible
- 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 input signal

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: 8192 pixels (1080×8192@60Hz)
  - Maximum frame rate: 120 Hz
  - Support for HDR (P20 only)
  - EDID management (support for standard resolutions and custom resolutions)
  - HDCP 2.2 compliant and downward compatible
- HDMI 1.3
  - 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: 120 Hz
  - EDID management (support for standard resolutions up to 2048×1152@60Hz and custom resolutions)
  - HDCP 1.4 compliant and downward compatible

OPT

- 10G optical fiber ports
- The OPT ports copy the outputs of HDMI 2.0 connectors.
- The transmission distance with SMF is up to 10 km.

Multiviewer

- One dedicated HDMI 1.3 connector
- Connect to the Multiviewer display, allowing for live monitoring of all the inputs and outputs from one display.
- The output resolution is fixed at 1920×1080@60Hz.

AUX

- HDMI 1.3 connectors
- Connect to auxiliary devices such as teleprompters.
- The output resolution is fixed at 1920×1080@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 in/out supported
- Customizable transition durations (0.1s to 10s)
- Two options for transition between PVW and PGM: Copy and Swap

Layers

- P20 supports up to 7 layers (3x 4K@60Hz layers and 4x 2K@60Hz layers, or 4x 4K@60Hz layers).
- P10 supports up to 6 layers (2x 4K@60Hz layers and 4x 2K@60Hz layers, or 3x 4K @60Hz layers).
- Customizable layer layout

BKG & Logo

- Up to 255 BKGs & LOGOs (Maximum storage space: 512 MB)
- BKG can be either a captured or imported image.
- High-resolution images can be captured from live inputs and outputs and used as BKG.

Control Options

- Front panel buttons and 5-inch graphical LCD
- Event controller U5/U5 Pro
- Event management software PixelFlow

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

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 only)
- Advanced DSK capability: chroma key and luma key (P20 only)
- 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	4096×2160@60Hz 8192×1080@60Hz	18 Gpbs
		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	
12G-SDI	8 bit 10 bit 12 bit	YCbCr 4:2:2	4096×2160@60Hz	11.88 Gpbs

Note:
Specifications subject to change without prior notice.

P_EN-30/04/2023