

# S16

## 4K Live Production Switcher



## Specifications

## Change History

Version	Release Date	Description
V1.2.1	2026-05-26	Updated the certifications.
V1.2.0	2026-04-03	<ul style="list-style-type: none"><li>• Added the video source features section.</li><li>• Added the description of DVE effect.</li><li>• Updated the number of encoders.</li><li>• The USB 3.0 Type-C port now supports external keyboard connection.</li><li>• Updated the weight and packaging accessories.</li></ul>
V1.1.0	2025-11-20	<ul style="list-style-type: none"><li>• Added the description of VISCA protocol for the PTZ camera.</li><li>• Added the description of the screen brightness adjustment.</li><li>• Added the description of the front panel area.</li><li>• Updated the power consumption.</li></ul>
V1.0.0	2025-08-15	First release

## Introduction

The S16 is a high-performance 4K live production switcher developed by PIXELHUE, designed to meet the needs of professional broadcasting and multimedia productions. Featuring 4K input and output capabilities, it receives and transmits ultra-high-definition videos, ensuring premium visual effects in various events. It supports UHD, FHD, and custom resolution options, offering flexible resolution adaptation capability. More importantly, it boasts industry-leading layer resource configuration, including 1 BKGD, 4 upstream keyers, 2 downstream keyers, and 1 SuperSource, offering unlimited possibilities for creative live productions.

The S16 is equipped with a 10.25-inch LCD display, providing professional Multiviewer function. It comes with an industrial-grade control joystick, making on-site adjustments and operations more intuitive and precise, and compatible with PTZ camera control. Its versatile live streaming module supports major streaming platforms globally, offers simultaneous 4-channel RTMP streaming, and provides 1080p@60Hz UVC output capability, meeting high-standard live streaming and online editing requirements. What's more, the S16 includes MIX, DIP, WIPE, and DVE transition effects, adding professional-quality visual effects to your streaming and recording.

With its high performance, flexibility, and innovative design, the S16 provides powerful and professional support for various live productions in corporate and commercial events, entertainment and cultural activities, sports events, community and religious gatherings, education and training, e-sports and game streaming, as well as personal and small studio productions.

## Certifications

CE, KC, CB, RoHS

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

## Features

### Display and Control

- 10.25-inch LCD screen
  - Professional Multiviewer function ensures thorough on-site adjustments before events and makes everything under control during production.
  - Independent LCD control greatly facilitates and simplifies on-site operations.
- Industrial-grade joystick
  - Compatible with PTZ cameras, offering multifunctionality and cost efficiency.
  - High-precision industrial-grade joystick ensures accurate adjustments of keyer position and size.
- Diverse control options
  - Equipped with 95 buttons, 12 encoders, and 1 T-bar, providing extensive operation options.
  - Combines buttons, encoders, T-bar, joystick, and LCD menu for a flexible, convenient, and precise operation experience.
  - Smart button reuse mechanism expands the actual number of operable buttons to 200+, significantly enhances operational efficiency.

### Input and Output

- 16x 12G-SDI + 4x HDMI 2.0 inputs

Supports up to 16 channels of UHD video signal inputs to meet large-scale production requirements.
- Main outputs: 2 groups of HDMI 2.0 / 12G-SDI
  - HDMI 2.0 and 12G-SDI within the same group output the identical content.
  - Supports selection of output content for each group.
- MVR outputs: 1x HDMI 2.0 + 1x 12G-SDI

Supports copy and independent modes.
- AUX outputs: 8x 12G-SDI + 4x HDMI 2.0

Supports output of input sources, PVW, PGM, Multiviewer, and Clean Feed.
- 1x USB 3.0 (Type-C)

Supports selection of streaming resolution, up to a maximum of 1080p@60Hz.

- Various audio connectors
  - 2x XLR/TRS audio input connectors
  - 2x XLR audio output connectors
  - 1x 6.35mm TRS (stereo) monitoring output connector, suitable for headphone monitoring
  - 2x Dante connectors (mutual backups) for digital audio input and output

Delivers multiple audio connection options along with mixing features to satisfy professional audio processing requirements.

## Keyer and Transition

- Powerful keyer adjustment features
  - Offers a wide range of keyer editing functions, such as position and size adjustments, cropping, keying, mask, borders, shadows, and color adjustments.
- Flexible keying options
  - Includes 1 main image + 4 upstream keyers + 2 downstream keyers.
- SuperSource
  - Provides professional multi-layer visual effects processing, allowing the combination of multiple input sources into a single input source, accommodating up to 1 background and 4 foreground images.
- Rich transition effects
  - Offers a variety of video transition effects, including MIX, DIP, WIPE, and DVE.
- Convenient PTZ camera and keyer control
  - Operate PTZ cameras (ONVIF and VISCA over IP protocols) with an 8-direction joystick for precise adjustments of camera images and keyers.

## Function and Operation

- End-to-end 4K compatibility
  - Accommodates signals at 4K and lower resolutions, ensuring image clarity.
- Flexible resolution adjustment
  - Supports switching between UHD, FHD, and custom resolutions.
- Multi-platform RTMP live streaming
  - Supports streaming up to four RTMP streams simultaneously to major global live streaming platforms.
- One-click recording
  - Allows recorded content to be directly stored on an external hard drive or USB drive.
- Network Tally
  - Sends Tally signals to monitors or cameras, displaying the live status of signal sources on these devices for quick identification of which sources are currently on air.
- Audio control
  - Provides professional audio processing features, including precise volume adjustment (gain and level) and mixing control to ensure optimal sound quality.

- Flexible preset and saving and recall
  - Supports saving up to 128 presets, including keyer and audio parameters.
  - Allows users to customize keyer properties and save these personalized settings as presets.
  - Enables quick switching between different presets to adapt to changing program content or layout, meeting diverse program needs.
- Screen brightness adjustment
- Genlock support
 

Allows precise synchronization of video signals with other equipment.
- Redundant backup
 

Offers complete redundancy, including input and output backups, providing comprehensive protection to ensure stable system operation.
- Easy maintenance and operation
  - Easy to maintain and repair
  - Verified through 24/7 stability tests, ensuring the system runs reliably and stably

## Appearance


**Note**

The pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

### Front Panel



No.	Area	Description
1	Output audio	Adjust the output volume.
2	LCD screen	Provide an intuitive LCD interface displaying menus and monitoring images.
3	Menu navigation	Choose menu options and configure relevant parameters.
4	Joystick	Precisely control the position, size, and direction of keyer and camera focus.
5	Input audio	Adjust the audio mix and volume.
6	Main program source switching	Quickly switch the BKGD source to the one bound to the button.
7	Auxiliary control	Perform operations such as delete, confirm, and enter numbers.
8	Comprehensive control	Edit keyers, load presets, and set camera presets.
9	Transition	Perform actions such as lock, live streaming, recording, and transition effects settings.

## Rear Panel



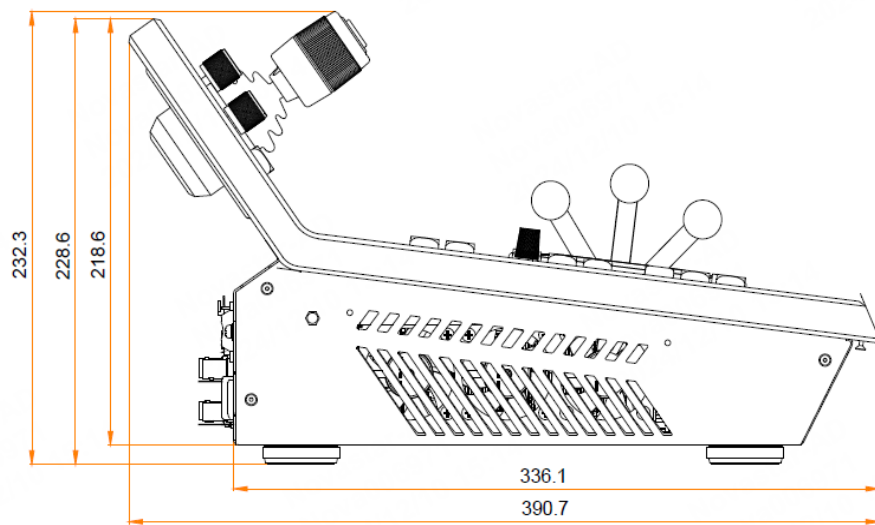
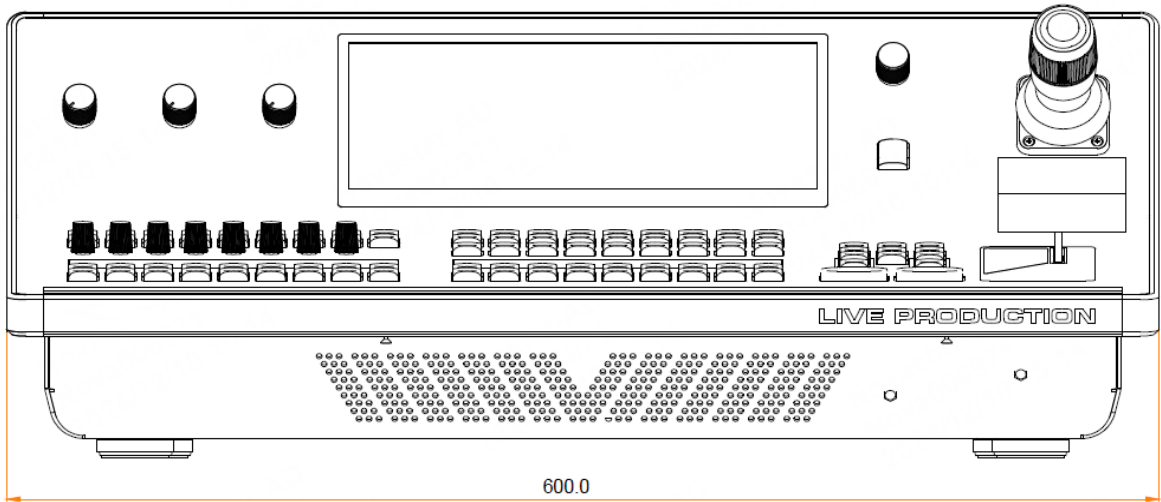
Area	Connector	Qty.	Description
INPUT (HDMI 2.0-12G SDI)	HDMI 2.0	4	<ul style="list-style-type: none"> <li>• Each supports up to 4Kx2K@60Hz 8-bit 4:4:4 inputs.</li> <li>• Support 8-bit, 10-bit, 12-bit input processing.</li> <li>• Support 4:4:4, 4:2:2, 4:2:0 format inputs.</li> <li>• Support EDID settings.</li> <li>• Support full and limited color ranges.</li> <li>• Support HDCP 2.2, downward compatible.</li> <li>• Support deinterlacing processing (only A and B).</li> <li>• Support embedded audio (24-bit/48 kHz, dual channel).</li> <li>• Support custom resolutions.                             <ul style="list-style-type: none"> <li>– Max width: 4096 pixels</li> <li>– Max height: 4096 pixels</li> </ul> </li> <li>• Can be selected alternatively with 12G-SDI input 7, 8, 15, 16.</li> </ul>

Area	Connector	Qty.	Description
	12G-SDI	16	<ul style="list-style-type: none"> <li>• Each supports up to 4K×2K@60Hz 10-bit 4:2:2 inputs.</li> <li>• Support ST-2081 (6G), ST-2082 (12G), ST-424 (3G), and ST-292 (HD) inputs.</li> <li>• Compatible with HD-SDI, 3G-SDI and 6G-SDI</li> <li>• Support YCbCr color space settings.</li> <li>• Support interlaced inputs.</li> <li>• Support deinterlacing processing (only the first row of 12G-SDI connectors).</li> <li>• Support embedded audio (24-bit/48 kHz, dual channel).</li> </ul>
OUTPUT (HDMI 2.0-12G SDI)	HDMI 2.0	2	<ul style="list-style-type: none"> <li>• Each supports up to 4K×2K@60Hz 8-bit 4:4:4 outputs.</li> <li>• Support 8-bit and 10-bit output processing.</li> <li>• Support 4:4:4 and 4:2:2 format outputs.</li> <li>• Support YCbCr and RGB color space settings.</li> <li>• Support interlaced outputs.</li> <li>• Support embedded audio (24-bit/48 kHz, dual channel).</li> <li>• Support custom resolutions.                             <ul style="list-style-type: none"> <li>– Max width: 4096 pixels</li> <li>– Max height: 4096 pixels</li> </ul> </li> </ul>
	12G-SDI	2	<ul style="list-style-type: none"> <li>• Compatible with HD-SDI, 3G-SDI and 6G-SDI</li> <li>• Support interlaced outputs.</li> <li>• Copy the output content on 2x HDMI 2.0.</li> <li>• Support embedded audio (24-bit/48 kHz, dual channel).</li> </ul>
MVR (HDMI 2.0-12G SDI)	HDMI 2.0	1	<ul style="list-style-type: none"> <li>• Support up to 4K×2K@60Hz 8-bit 4:4:4 outputs.</li> <li>• Support separate timing configuration. When the timing matches the main output 1 timing, output via AUX is supported.</li> </ul>
	12G-SDI	1	
AUX (HDMI 2.0-12G SDI)	HDMI 2.0	4	<ul style="list-style-type: none"> <li>• Support up to 4K×2K@60Hz 8-bit 4:4:4 outputs.</li> <li>• Support output of input sources, PVW, PGM, Multiviewer, and Clean Feed.</li> <li>• Support embedded audio (24-bit/48 kHz, dual channel).</li> </ul>
	12G-SDI	8	
CONTROL	USB 3.0 (Type-C)	2	<ul style="list-style-type: none"> <li>• USB 3.0 (TYPE-C) 1                             <ul style="list-style-type: none"> <li>– Connect to devices like USB drives for storage, firmware update, and log export.</li> <li>– Connect an external keyboard.</li> </ul> </li> <li>• USB 3.0 (TYPE-C) 2                             <ul style="list-style-type: none"> <li>– Allow selecting streaming output resolution, up to 1080p@60Hz.</li> <li>– Connect to devices like USB drives for storage, firmware update, and log export.</li> <li>– Connect an external keyboard.</li> </ul> </li> </ul>
	LTC (reserved)	2	1x LTC IN, 1x LTC OUT <ul style="list-style-type: none"> <li>• IN: Connect to external devices with LTC format time code.</li> <li>• OUT: LTC time code output</li> </ul>

Area	Connector	Qty.	Description
	GENLOCK	2	1x GENLOCK IN, 1x GENLOCK OUT Support Bi-Level and Tri-Level. <ul style="list-style-type: none"> <li>• IN: Receive the Genlock signal.</li> <li>• OUT: Loop through the Genlock signal.</li> </ul> Genlock signal supports frame rate range from 23.98 Hz to 60 Hz.
	ETHERNET	2	2x Gigabit Ethernet ports <ul style="list-style-type: none"> <li>• Support network Tally.</li> <li>• Connect to the control PC software (reserved).</li> <li>• Support PTZ control.</li> </ul>
AUDIO	XLR/TRS (IN)	2	2x Audio input connectors <ul style="list-style-type: none"> <li>• XLR: 24-bit/48 kHz, mono</li> <li>• TRS: 24-bit/48 kHz, stereo</li> </ul>
	XLR (OUT)	2	2x Audio output connectors 24-bit/48 kHz, mono, defaulting to output the left and right channels of PGM audio
	PHONES OUT	1	1x 6.35 mm TRS (24-bit/48 kHz, stereo) monitoring output connector Used for monitoring or transmitting unbalanced stereo audio signals
	Dante	2	2x Digital network audio connectors for input and output <ul style="list-style-type: none"> <li>• RJ45 connector</li> <li>• Support network audio input and output.</li> <li>• Support 64x64 channel audio routing capability.</li> </ul>
LIGHT	-	1	Connect to a gooseneck light.
Power	100-240V~, 50/60Hz	1	AC power input

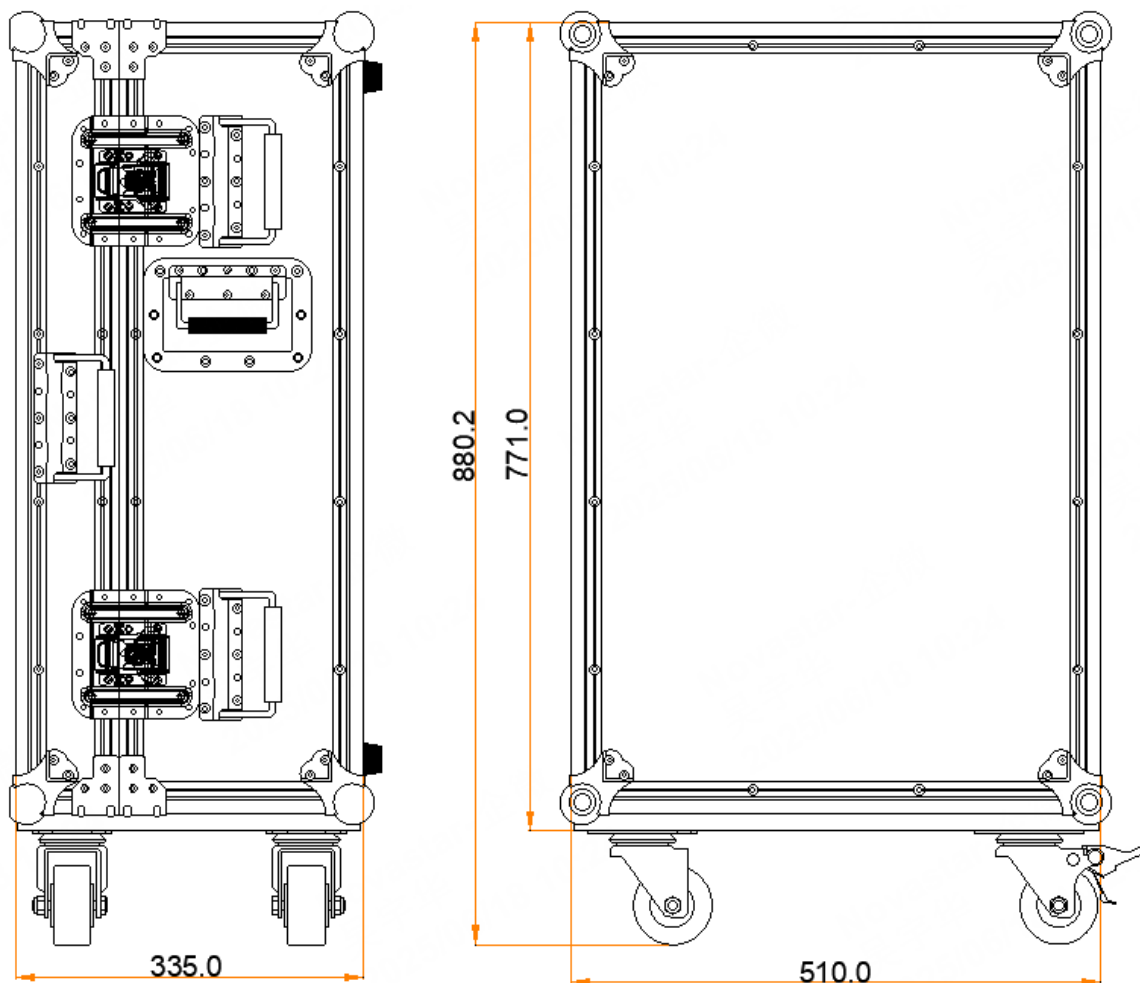
# Dimensions

## Device



Tolerance:  $\pm 0.5$  Unit: mm

### Flight Case

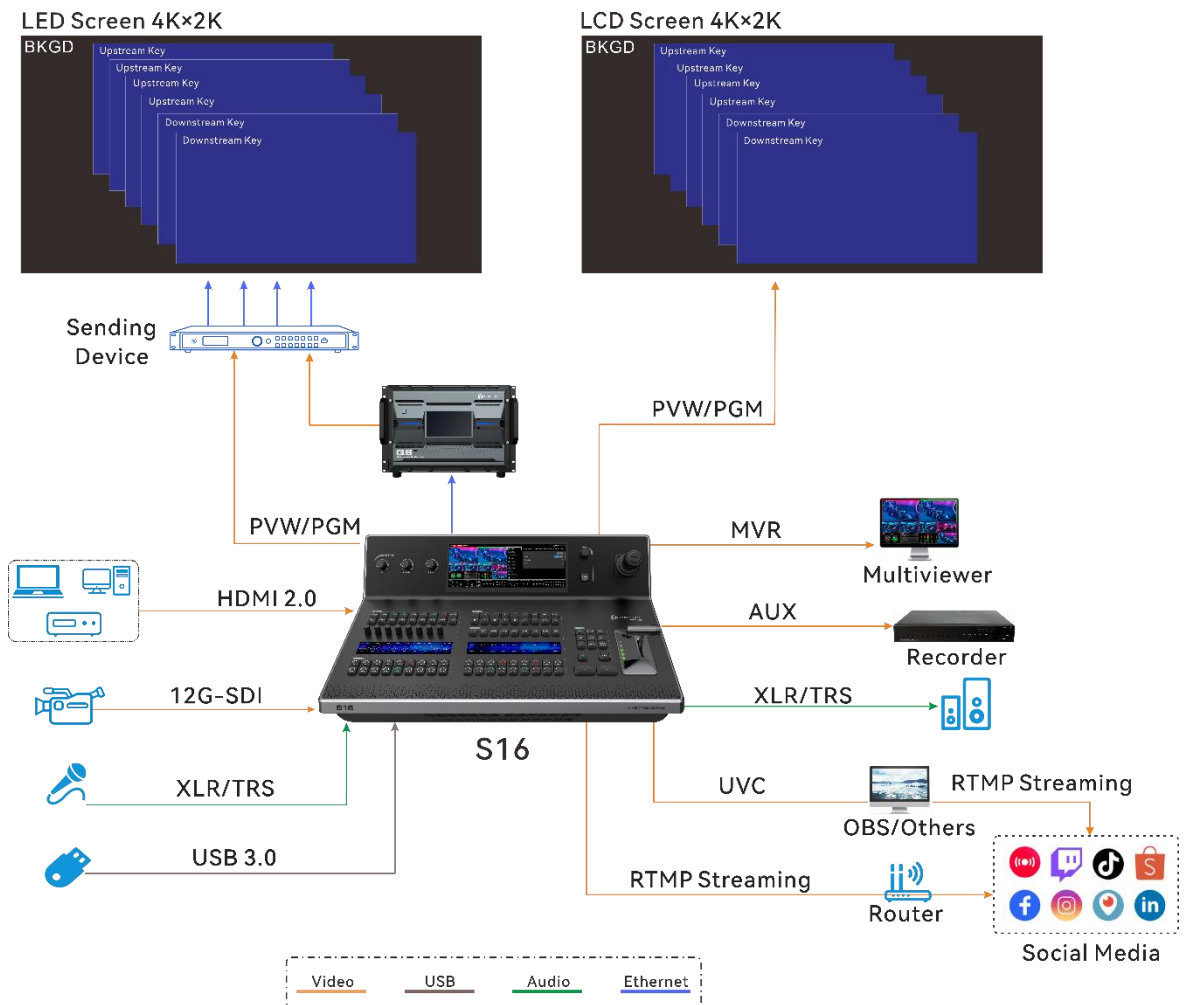


Tolerance:  $\pm 5$  Unit: mm

 Note

For detailed drawings of the flight case dimensions, please contact PIXELHUE technical support.

# Applications



## Specifications

Electrical Specifications	Power connector	100–240V~, 10A, 50/60Hz
	Max consumption	250 W
Operating Environment	Temperature	0°C to +40°C
	Humidity	5%RH to 85%RH, non-condensing
Storage Environment	Temperature	–20°C to +70°C
	Humidity	5%RH to 95%RH, non-condensing
Physical Specifications	Dimensions	600.0 mm × 390.7 mm × 232.3 mm
	Net weight	13.0 kg
	Gross weight	17.5 kg (Paper box + Packaging + Device net weight) 41.5kg (Flight case + Packaging + Device net weight)
Packing Information	Paper box	720.0 mm × 515.0 mm × 340.0 mm
	Flight case	880.2 mm × 510.0 mm × 335.0 mm
	Accessories	1x Power cable 1x HDMI cable 1x Cat5e cable 1x Gooseneck light 1x Quick Start Guide 1x Embedded Assembly Guide 1x Safety Manual 1x Certificate of Approval 1x Customer Letter
Noise Level (typical at 25°C/77°F)		40 dB (A)

## Video Source Features

Input Connectors	Bit Depth	Color Space/ Sampling Rate	Supported Resolutions (Partial)	Connector Bandwidth (Gbps)
HDMI 2.0	8-bit	RGB 4:4:4	4096×2160@60Hz	18
		YCbCr 4:4:4		
		YCbCr 4:2:2		
	10-bit	RGB 4:4:4	4096×2160@30Hz	
		YCbCr 4:4:4	4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
	12-bit	RGB 4:4:4	4096×2160@30Hz	
		YCbCr 4:4:4	4096×1080@60Hz	
		YCbCr 4:2:2	4096×2160@60Hz	
12G-SDI	10-bit	YCbCr 4:2:2	4096×2160@60Hz	11.88

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