

Colorlight

CS16K

Multimedia Server

Specification V1.3



1. Overview

CS16K is a highly capable multimedia server that excels in playback control performance, scalability, and stability. It boasts powerful hardware that enables the decoding and playback of two 8K videos, while also allowing for the output of eight 4K@60Hz video signals. Paired with the preinstalled GrandShow, a professional playback and control software crafted by Colorlight, CS16K can simultaneously decode and play materials across various formats, delivering multiple display effects such as multi-screen splitting and irregular-shaped screen splicing. Moreover, it offers flexible features such as multiple layers, multiple scenes, and seamless switching. These capabilities fully satisfy the diverse demands of the playback control industry.

2. Features

- 6×DP1.4 and 2×Type C video output ports (up to 4K@60Hz per port)
- A single device supports pixel-to-pixel control and playback of up to 16384×4608@60Hz
- Playback of diverse materials, such as videos, images, PPTs, texts, webpages, and streaming media
- Multi-scene operations such as editing, previewing, switching, saving, and copying
- Quick functions such as screen freezing, background image display, and scene switching
- 10bit HDR video decoding and playback
- Supports server 3D Genlock signal
- Creative display options such as arbitrary image rotation, ultra-long displays, special-shaped screen splicing, and irregular screen splitting
- Real-time monitoring of the system operating status, providing alerts in case of device failure or playback material anomalies
- Preview of playback content and real-time monitoring of output image
- Quick control using an external MIDI controller
- Receiving NDI signals
- Multi-device primary-backup redundancy
- Timed power on/off and automatic scene looping
- Control via tablet app for visualized operations like image monitoring

and seamless scene switching

- Supports central control protocols for scene switching, image playback, volume adjustment and other functions
- Supports timeline playback for flexible program scheduling and dynamic timeline effects that change over time
- Performance monitoring by checking system resource usage and playback logs
- Scheduled command list allows for timed execution of commands and operations like software opening/closing/restarting, server shutdown/restart, playback, pause, and stop
- Window effects for playback materials, including color wheel, feather, fisheye, invert colors, kaleidoscope, keying, marquee, mask, mosaic, night vision, emboss, sharpen, flicker, and swirl
- Transition effects such as fade in/out, move left/right, move up/down, smog, and fire

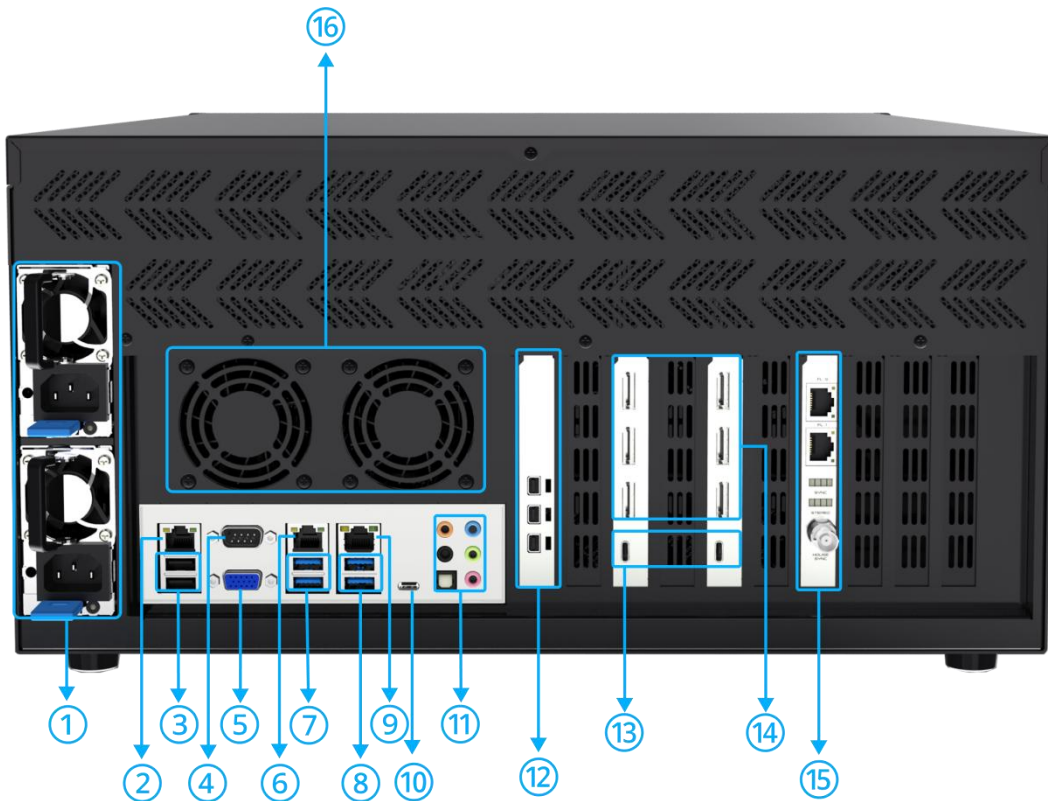
3. Appearance

3.1 Front Panel



No.	Item	Description
1	Power switch	Power on/off the device
2	USB	2×USB 3.0 ports for external devices such as keyboard, mouse, and USB flash drive

3.2 Rear Panel



No.	Item	Description
1	Power connector	1300W redundant power supply
2	Intel LAN1	Gigabit Ethernet port
3	USB 2.0	2×USB 2.0 ports
4	COM	DB9 port
5	VGA	VGA video port
6	IPMI LAN	Remote management port
7	USB 3.2 Gen 1	2×USB 3.2 ports
8	USB 3.2 Gen 1	2×USB 3.2 ports
9	Intel LAN2	10 Gigabit Ethernet port
10	Type-C	Type-C port
11	Audio port	7.1-channel audio port
12	3×Mini DP	Video output ports
13	2×Type-C	Type-C video output ports
14	6×DP	Video output ports
15	Video sync card	Sync signal port
16	Fan	2×cooling fans

4. Application



5. Specifications

Model	CS16K	
Chassis	5U	
Operation interface port	Mini DP×3 (Up to 4096×2304@60Hz per port)	
CPU	Intel Xeon 16-core 32-thread processor	
RAM	128G	
Storage	2TB M.2 high-speed SSD (expandable)	
Capture card (optional)	HDMI, SDI, DVI ports	
Graphics card	2×Quadro 8GB professional graphics cards + 4GB professional graphics card	
Video port	DP1.4×6+Type-C×2	
Maximum output (single port)	4096×2304@60Hz	
Maximum output (whole device)	16384×4608@60Hz	
Audio	Support audio input and multi-channel output	
Network	1GbE&10GbE	
Playback and control software	GrandShow	
Operating environment	Temperature	0°C~55°C/32° F~131° F
	Humidity	0%RH~85%RH, non-condensing
Storage environment	Temperature	-40°C~70°C/-40° F~158° F
	Humidity	0%RH~95%RH, non-condensing
Electrical specifications	Power supply	200-240V~8A, 50/60Hz
	Power	700W
Physical specifications	Net weight	20.6Kg / 45.4lbs
	Dimension (W×H×D)	482.6mm×236.76mm×577.4mm/ 19.00"×9.32"×22.73"

6. Signal Formats

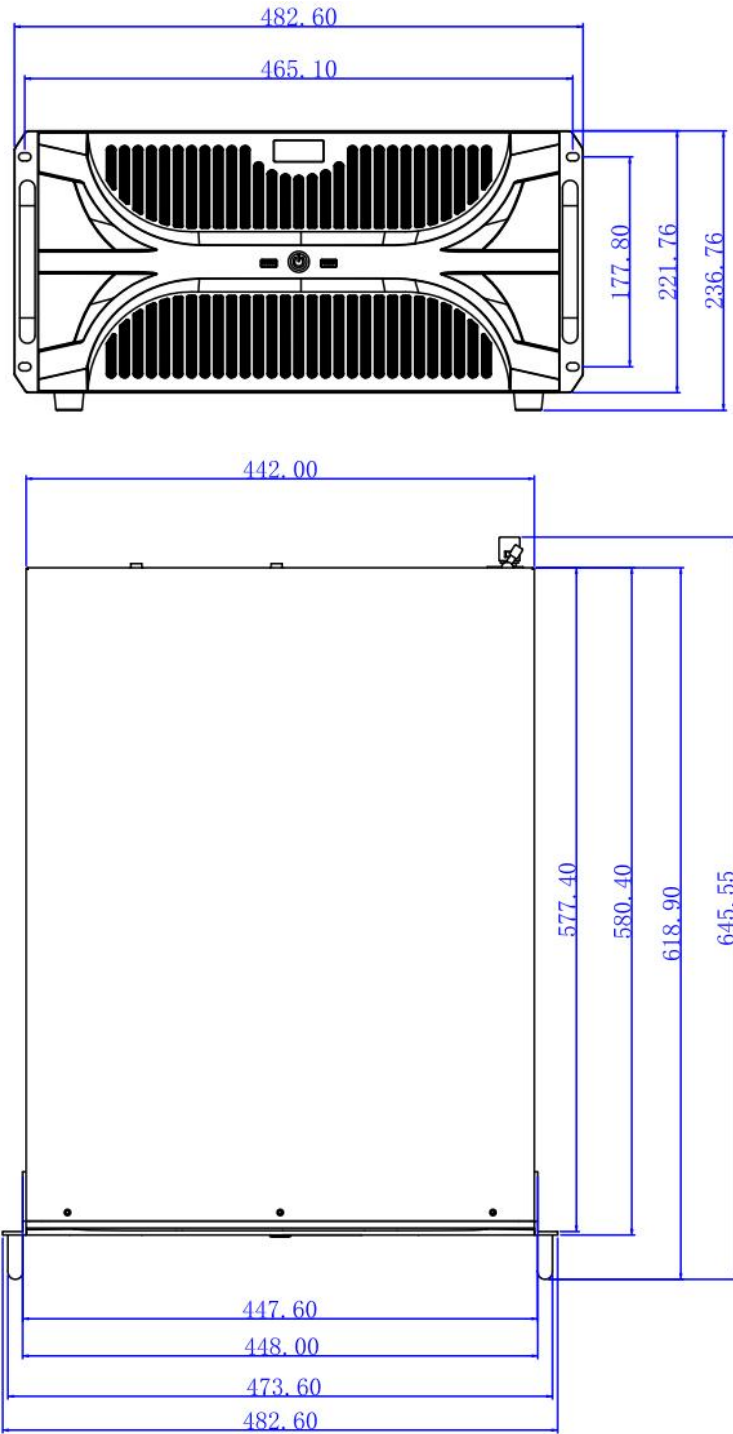
DP1.4 (6), Type-C (2)					
Output	Maximum Resolution	Color Space	Sampling	Color Depth	Frame Rate
4K	4096x2304	YCbCr	4:2:2	8/10bit	23. 98, 24, 25, 29. 97, 30, 50, 59. 94, 60
		YCbCr/RGB	4:4:4	8/10bit	
	3840x2160	YCbCr	4:2:2	8/10bit	
		YCbCr/RGB	4:4:4	8/10bit	
2K	2048x1080	YCbCr	4:2:2	8/10bit	23. 98, 24, 25, 29. 97, 30, 50, 59. 94, 60, 100, 120
		YCbCr/RGB	4:4:4	8/10bit	
	1920x1080	YCbCr	4:2:2	8/10bit	
		YCbCr/RGB	4:4:4	8/10bit	

Note: The above figure only shows some of the common resolutions.

7. Dimensions

Unit: mm

Tolerance: $\pm 0.2\text{mm}$



Statement

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Colorlight

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