

Video playback control server

S8-UHD



Specification Document

Revision History

Release version	Release date	Update Notes
V1.0	2021-08-31	• First release
V1.1	2022-06-15	• Updated power/graphics/VGA/COM interfaces
V1.2	2022-09-06	• Updated appearance parameters/system introduction
V1.3	2023-05-22	• Add a T1000 graphics card as a display • The broadcast control system was changed to window version

Product Introduction

S8-UHD video server is a multimedia integrated broadcast control server for large-scale LED broadcast control scene applications such as multimedia exhibition halls, banquet halls, and live performances. It has the signal processing capabilities of traditional multi-screen splicing processors, and integrates the media editing and broadcasting functions and lighting choreography control functions of professional stage performances. It can not only complete high-quality ultra-large resolution point-to-point display, but also realize a variety of display ideas. The S8-UHD video server is equipped with professional LED broadcast control software, providing users with convenient scene management and professional LED human-computer interaction interface, which is suitable for performing arts, exhibitions, large-scale buildings and various creative display application scenarios.

Certification

CCC、CE、Rohs

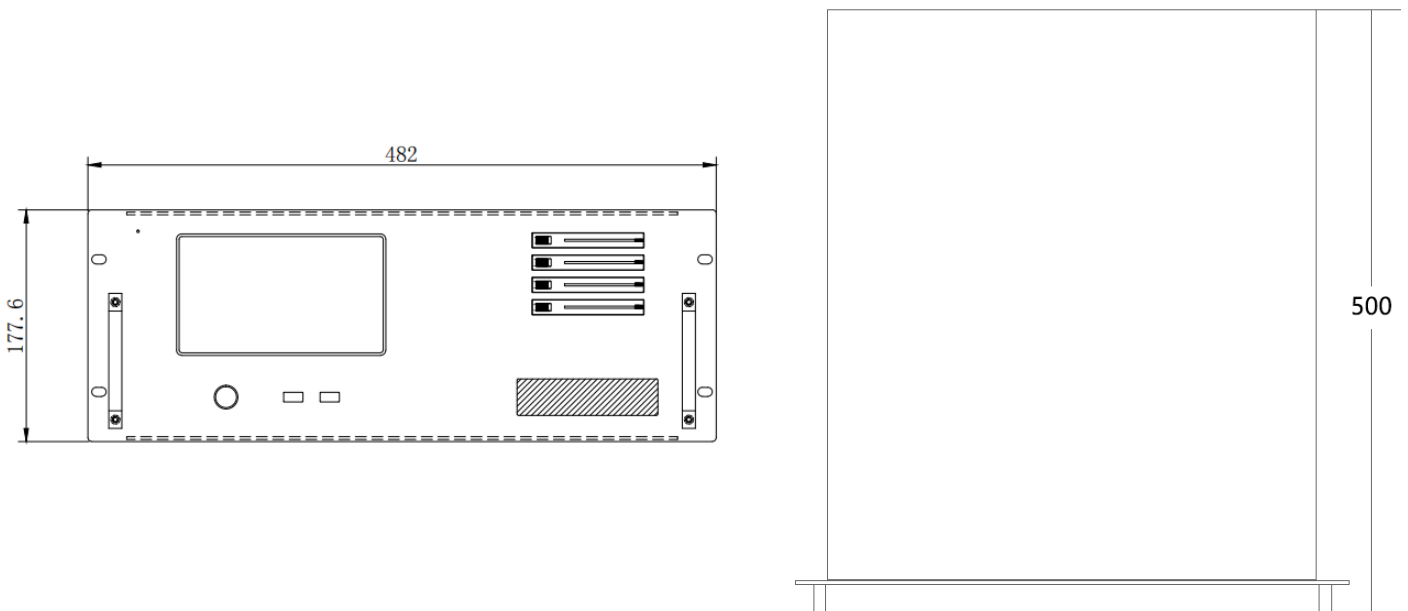
If the product does not have the relevant certification of the country or region to which it is sold, please contact Ruizhong Technology for confirmation or processing as soon as possible, otherwise, if the relevant legal risks are caused, the customer shall bear it or Ruizhong Technology has the right to recover.

Product Features

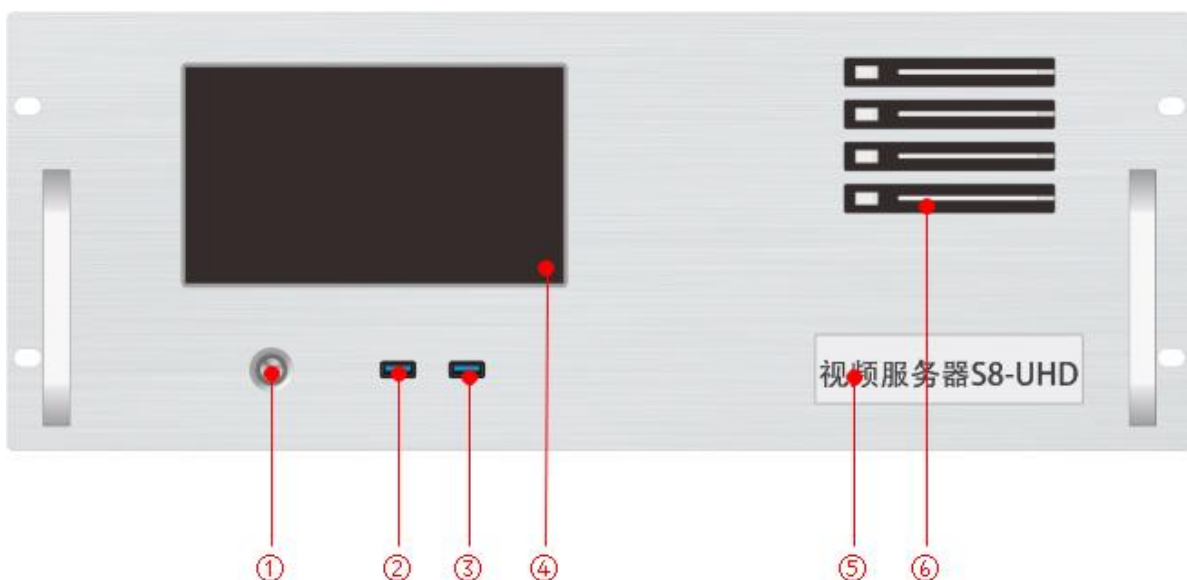
- The maximum load width of the single-port output port is 4096Px, the maximum height is 2160Px, and it can be customized within the range of 8.84 million Px.
- The front 7-inch touch screen displays real-time information such as temperature, hardware utilization, and output port status.
- The whole machine can carry 70 million pixels and supports customization.
- Hardware decoding capability: multi-channel 2K/4K/8K hardware decoding.
- Video input: 4K/2K input is optional.

- Number of input channels: 1-4 HDMI/DVI/SDI optional.
- Support HDMI/DVI/SDI multiple signal inputs 2K/4K custom capture card (optional).
- Support tablet central control playback;
- Support TCP/UDP protocol network commands;
- It supports any angle rotation of the screen, which is suitable for various creative display applications;
- LTC timecode synchronization;
- 2000W redundant power supply.
- Supports 3D mapping;
- Built-in universal decoder, which can decode common and professional video formats such as HAP, DXV, HEVC, etc.

Product Dimensions

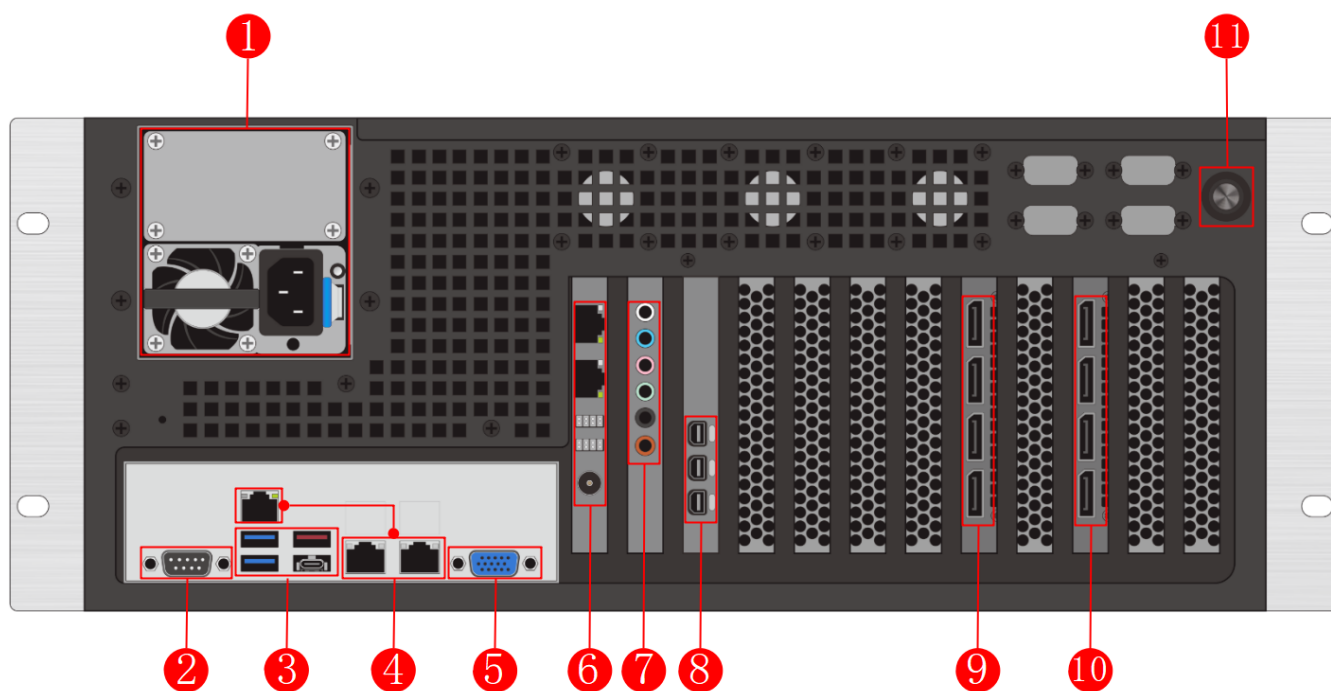


Product Appearance



Front Panel

Index	Interface	Quantity	Illustrate
1	Power on and off button	1	<ul style="list-style-type: none"> Power on and off button
2	USB	1	<ul style="list-style-type: none"> Type-A USB3.0 *1
3	USB	1	<ul style="list-style-type: none"> Type-A USB3.0 *1
4	7-inch touchscreen display	1	<ul style="list-style-type: none"> Display system information, hardware monitoring, temperature detection, output port status
5	Model label	1	<ul style="list-style-type: none"> The identity of the server
6	Front hard drive enclosure	4	<ul style="list-style-type: none"> 2.5-inch SATA HDD can be installed



Back Panel

Index	Interface	Quantity	Illustrate
1	Power input	1	<ul style="list-style-type: none"> Power input 110V-240V 50/60Hz Alternating current
2	COM port	1	<ul style="list-style-type: none"> COM port, connect to RS232 devices
3	USB	4	<ul style="list-style-type: none"> 1×Type-C 2×Type-A USB3.0 1×Type-A USB3.1
4	RJ45	3	<ul style="list-style-type: none"> 1× IPMI management port 2× Gigabit self-RJ45 adaptation ports
5	VGA	1	<ul style="list-style-type: none"> Connect a VGA display For setting up the system only
6	Sync card	1	<ul style="list-style-type: none"> 2× RJ45 ports for cascading between sync cards 1×BNC port for connecting external frame synchronization signals
7	Audio	6	<ul style="list-style-type: none"> Grey – Side Surround Speaker Connector: In the eight-channel sound setting, it is used to connect the side surround speaker.

			<ul style="list-style-type: none"> • Blue – Source Input: Used to connect audio outputs for recorders, speakers, etc. to this audio input port. • Pink – Microphone Port: This port is used to connect to a microphone • Green - Audio output port: used to connect audio receiving devices such as headphones or speakers. • Black – Rear Surround Speaker Connector: Used to connect rear surround speakers in 4/6/8 channel audio settings. • Orange – Center/Subwoofer Connector: In the six-channel/eight-channel audio settings, it is used to connect the center/subwoofer.
8	MiniDP	3	<ul style="list-style-type: none"> • 3× MiniDP output port • Can be connected to a control display
9	DP1.4 port	4	<ul style="list-style-type: none"> • 4 DP1.4 ports • It can output 4 channels of 4K video signal • Support fusion and tiling display
10	DP1.4 port	4	<ul style="list-style-type: none"> • 4 DP1.4 ports • It can output 4 channels of 4K video signal • Support fusion and tiling display
11	Reset the button	1	<ul style="list-style-type: none"> • BIOS reset button • The server restarts after pressing

Device Hardware/Software

Hardware Parameters			
CPU:	® Intel Xeon ® processor Gold 5317 24 cores and 48 threads, main frequency 3.0GHz, turbo frequency 3.6GHz		
Memory:	64GB DDR4 RECC		
Storage:	3.84TB NVMe M.2 SSD with hot-swappable hard drives		
Output Graphics Card:	2x NVIDIA RTX A5000 24GB VRAM Professional Graphics Card		
Control Graphics Card:	NVIDIA T1000 4GB Professional Graphics Card		
Sync card	NVIDIA SYNC II Synchronization Card		
Power supply:	2000W power supply (can be upgraded to 1+1 redundant backup)		
Chassis:	4U hot-swappable chassis		
Radiator:	Air-cooled heat dissipation		
Software			
Operating system:	Windows 11 Enterprise	Broadcast Control System:	LED Broadcast Control System (Window Version)
Power Supply			
Input Power:	110-220V AC ~50hz		
Maximum Power:	2000W		

Equipment specifications

Electrical Specifications	110-240V~ 6A 50/60Hz ;2000W maximum power
Installation Specifications:	4U rack-mounted installation (according to the site situation).
Dimensions	500mm (length) × 482mm (width) × 178mm (height)
Working environment	Temperature: 5-35°C (40°-95°F), Humidity: 5%-95% (non-condensing).
Storage environment	-10°C to +60°C; 0% RH to 95% RH, non-condensing

Package size	678mm (length) × 548mm (width) × 265mm (height).
Fittings	Power Cable*1, Ethernet Cable*1, Mouse and Keyboard Set*1, Wireless LAN*1, DP Cable*8, MiniDP to HDMI Cable*1, MiniDP to DVI Cable*1 Activation Label*1 (Attached to the Front Panel of the Case), Test Report*1, Test Report*1, Certificate of Conformity*1, Packing List*1

Media type

Media type	Media format
Video	mp4、avi、mkv、flv、mov、wmv、mpeg、mpg、m4v、webm、HAP
Audio	mp3、aac、flac、amr、ape、wav、wma
Image	jpg、jpeg、bmp、png、gif、ico
Text	Txt
Streaming	Ndi、http、rtsp、rtp、rtcp、rtmp、mms、hls
Web page	Any web page that can be accessed
Office files	PPT(1080P)

i illustrate

Video encoding format recommendation:

- If the video is between 4K and 8K in size, with a width of 8192 or less and a height of 4320, H.265 (HEVC) or VP9 encoding is recommended.
- When the video is 4K or smaller, H.264 (AVC) encoding is recommended.
- If the video is over 8K and the width is not more than 15,360 and the height is not more than 7,680, it is recommended that the video be encoded in HAP.

For the best performance and image quality, the recommended video source bitrate is as follows:

Video resolution	24-30 fps (standard video)	48-60 fps (high frame video)
4320P (8K)	70-100Mbps	100-140Mbps
2160P (4K)	35-45Mbps	55-70Mbps
1080P (2K)	10Mbps	16Mbps

The above is the recommended video bitrate for SDR sources

Function support

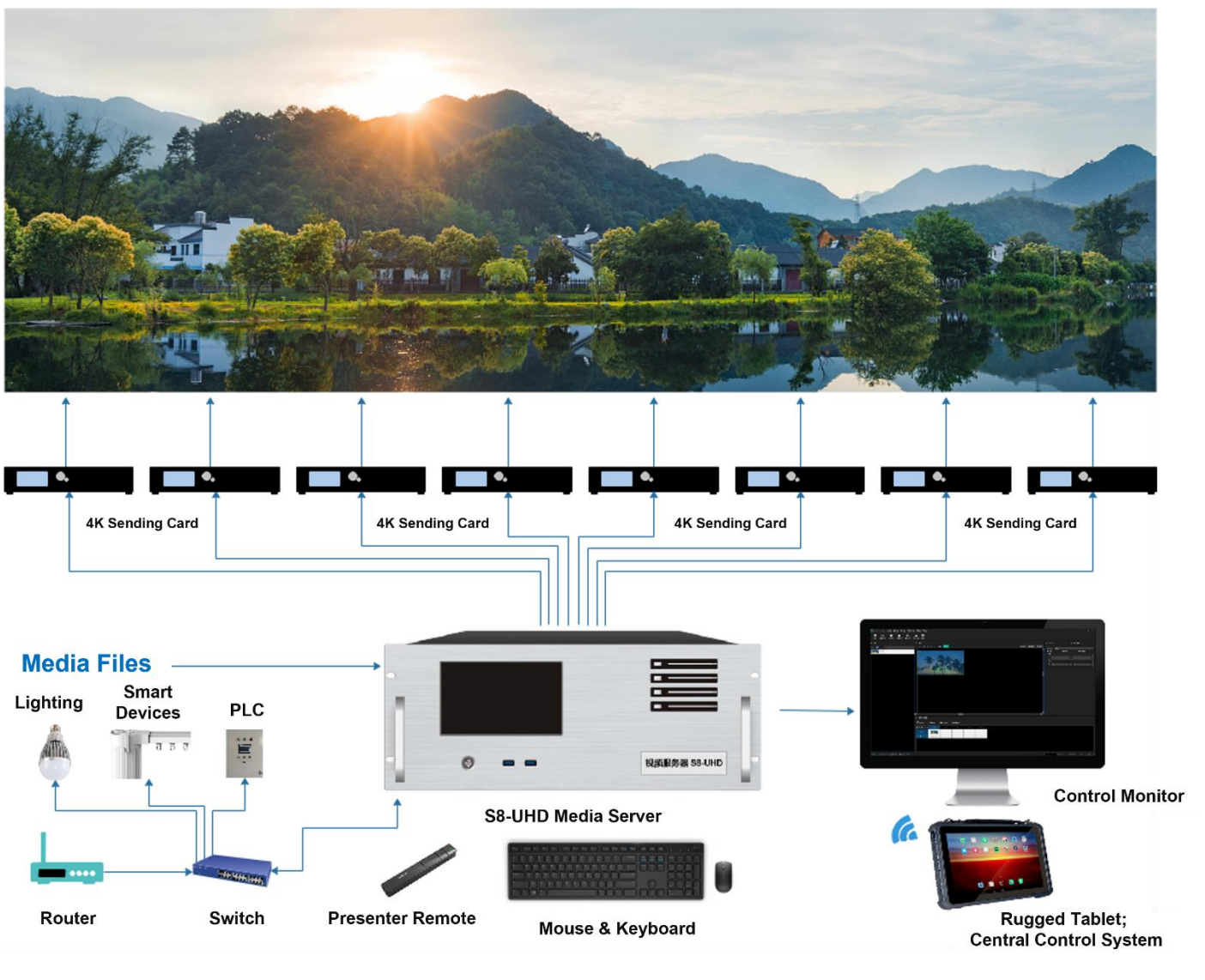
Function	Description
Hot Standby	Supports automatic hot standby switching
Media Support	Supports playback of various media such as PPT, web pages, videos, images, and audio
Slice Masking	Supports importing slice data, and masking functions
Chroma Keying	Supports chroma keying, including custom color keying
Cascade	Supports multi-machine cascade control
3D WEB Playback Control System	Supports multi-terminal control
24-244 Frame Rate Selection (Frame Interpolation Playback)	Supports
Control System (Standard Edition)	Supports
Preview Monitoring System	Supports
Interactive Games	Supports
NDI Capture	Supports
Streaming Media Playback	Supports
LTC/NTC Timecode	Supports receiving and sending timecode
DMX512	Supports recording, playback, and control of DMX512 signals
TCP/UDP Protocol	Supports sending TCP/UDP control commands and receiving TCP/UDP control commands

Packing List

Item	Quantity	Specifications	Unit
Host	1	S8-UHD	Unit
Power Cord	1	1.8 meters	Strip
MiniDP to HDMI cable	1	30 cm	Strip
MiniDP to DVI cable	1	30 cm	Strip

DP Cable	8	2 meters	Strip
Wireless Network Card	1	USB wireless network card	Piece
Keyboard and mouse	1	Dual delphinium USB keyboard mouse	Set
Certificate of Conformity	1		Copy
Testing report	1		Copy
Functional Checklist	1		Copy
Packing List	1		Copy

Application Scenarios



i Illustrate

When using the device, place the device horizontally, do not flip or place it vertically.

The product can be installed in a standard 19-inch cabinet. The cabinet load requirement is at least

four times the weight of all equipment in the cabinet. It needs to be installed with 4 M5 panel screws.

Affirmations and Warnings

This is a Class A product. In a residential environment, this product may cause radio interference. In such cases, users may need to take practical measures to address the interference.

Disclaimer

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