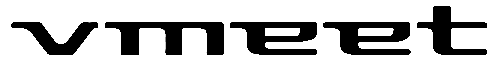
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**Media Broadcast Control Server**

**S4-FHD**

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 | 2023-06-13 | • Added HDMI monitor ports  • Added DIV display port  • Add a T400 graphics card as a display  • Change the broadcast control system to window version |
| V1.4 | 2023-07-25 | • Graphics card upgraded to NVIDIA RTX A2000 12GB |
| V1.5 | 2024-02-20 | • Graphics card upgraded to NVIDIA RTX4000 8GB stand-alone graphics card |

**Product Introduction**

S4-FHD media broadcast control 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 S4-FHD media broadcast control 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**

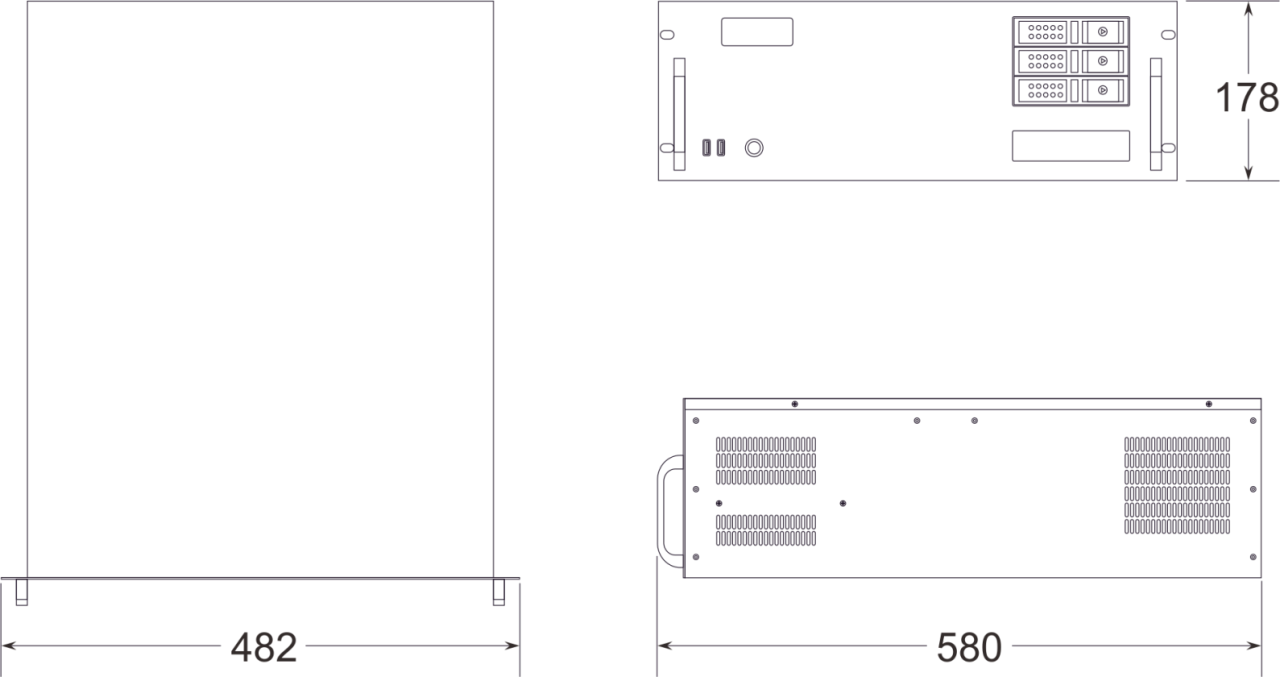
CCC、CE、Rohs

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

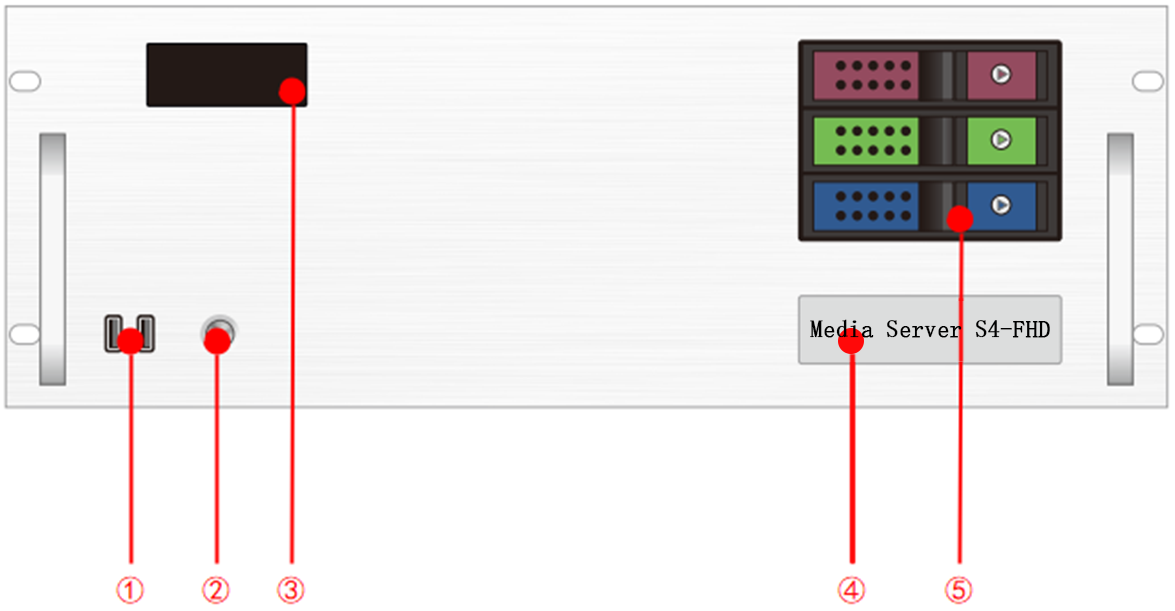
**Product Features**

* Single outlet with maximum load width 8192Px, maximum height 8192Px, in the range of 8.84 million Px user-defined.
* Machine load: maximum width of single screen 16384Px, maximum 4320Px, can be customized.
* Hardware decoding capability: 1 channel 8K hard decoding or 4 channel 4K hard decoding, support multi-channel 2K hard decoding.
* Video input: 4K/2K input is optional.
* Number of input channels: 1-4 HDMI/DVI/SDI Optional.
* Supports multiple HDMI/DVI/SDI signal input 2K/4K custom acquisition card (optional).
* support tablet central control playback;
* Supports TCP/UDP network commands.
* Supports screen rotation at any Angle, suitable for a variety of creative display applications;
* LTC Time code synchronization;
* 650W Server power supply.
* 3D mapping;
* Built-in universal decoder, can decode HAP, DXV, HEVC and other common and professional video formats.

**Product Dimensions**

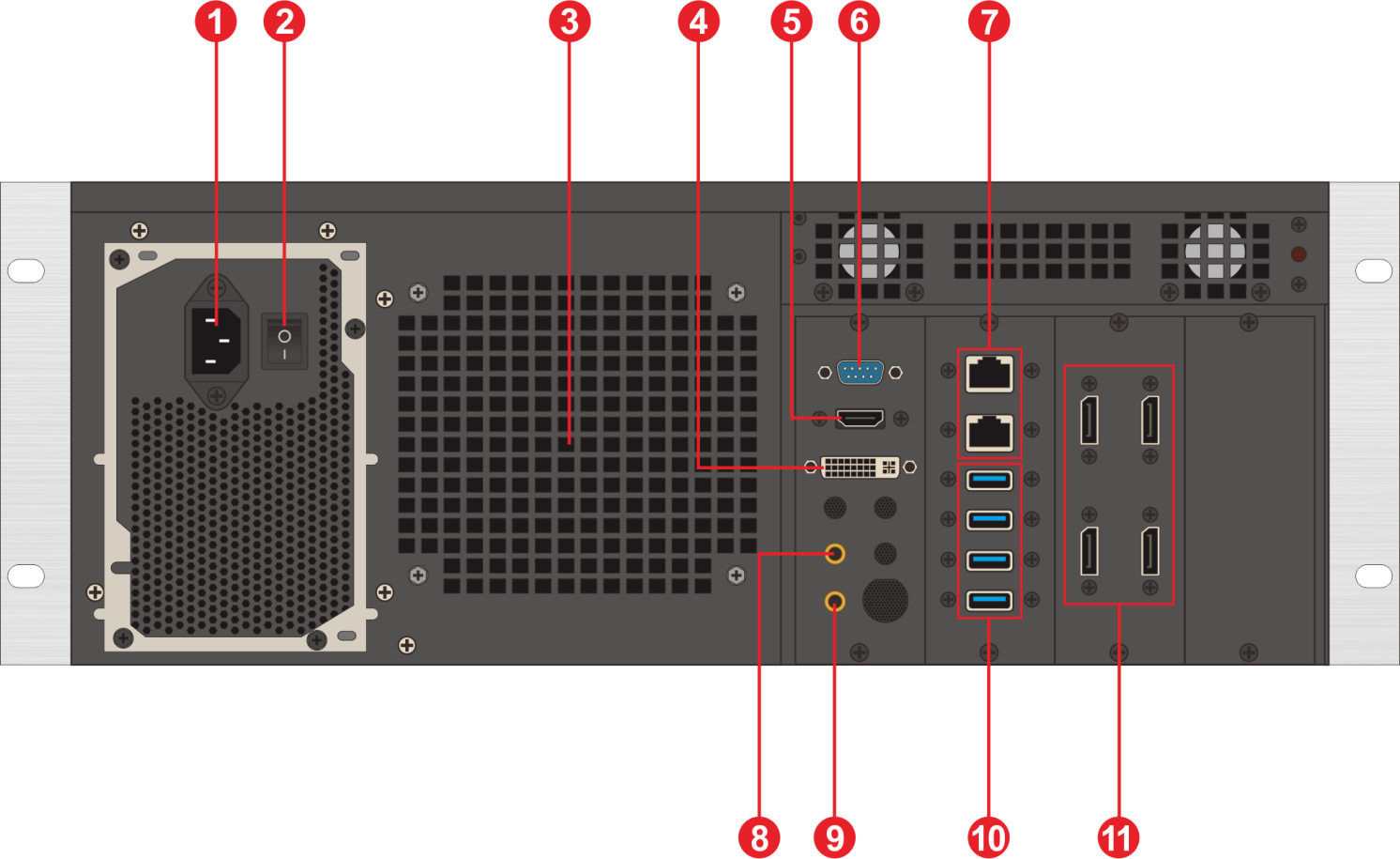


**Product Appearance**



Front Panel

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Interface | Quantity | Illustrate |
| 1 | USB | 2 | • Type-A USB3.0  • Connectable to mouse, keyboard |
| 2 | Switch button | 1 | • Switch button |
| 3 | Temperature control display screen | 1 | • Displays server runtime, temperature, fan status, abnormal alarms |
| 4 | Identification | 1 | • Server model and name identification |
| 5 | Front hard drive bay | 3 | • Installable with 3.5-inch, 2.5-inch SATA interface hard drives |

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Back Panel

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Interface | Quantity | Illustrate |
| 1 | Power input | 1 | • Power input  • 110V-240V 50/60Hz  • AC power |
| 2 | AC switch | 1 | • Main power switch |
| 3 | Cooling vent | 1 | • CPU water-cooling radiator fan cooling vent |
| 4 | DVI output | 1 | • Connect DVI monitor  • For operating and editing broadcast control software |
| 5 | HDMI Output | 1 | • Connect to HDMI monitor  • For operating and editing broadcast control software |
| 6 | COM Port | 1 | • COM interface  • Connect to RS232/485 protocol serial devices |
| 7 | Ethernet Ports | 2 | • 1GB RJ45 port \*1  • 5GB RJ45 port \*1 |
| 8 | Audio output | 1 | • 3.5mm standard audio output |
| 9 | Microphone | 1 | • 3.5mm standard audio output port  • Can connect to microphone input audio  • Can accept audio time code |
| 10 | USB | 4 | • Type-A USB3.0 \*4  • Connects to mouse, keyboard, USB flash drive, external hard drive, wireless network card, etc. |
| 11 | DP1.2 | 4 | • Connects to monitor for displaying software editing interface  • Connects to sending card or display screen for outputting images  • Maximum output 4096\*2160@60Hz |

**Device Hardware/Software**

|  |  |  |  |
| --- | --- | --- | --- |
| **Hardware Parameters** | | | |
| CPU | Intel® Xeon® W-2150B Processor, Base Frequency 3.0GHz, Turbo Boost 4.50GHz, 10 Cores, 20 Threads. | | |
| Memory | 32GB DDR4 | | |
| Storage | M.2 512G NVMe, supports hot-swappable hard drives | | |
| Output Graphics Card | NVIDIA RTX 4000 8GB dedicated graphics card | | |
| Control Graphics Card | NVIDIA T400 4GB professional graphics card | | |
| Power supply | Great Wall 650W | | |
| Chassis | 4U hot-swappable chassis | | |
| Cooler | Water-cooled (CPU), air-cooled (GPU) | | |
| **Software** | | | |
| Operating system | Windows 10 Enterprise | Broadcast Control System | LED Broadcast Control System (Window Version) |
| **Power supply** | | | |
| Input Power | 110-220V AC ~ 50Hz | | |
| Maximum Power | 650W | | |

**Equipment Specifications**

|  |  |
| --- | --- |
| Electrical Specifications | 110-240V~ 6A 50/60Hz ；650W maximum power |
| Installation Specifications | 4U rack-mounted installation (according to the site situation). |
| Dimensions | 580mm (length) × 482mm (width) × 178mm (height) |
| Working environment | Temperature: 5-35°C (40°-95°F), Humidity: 5%-95% (non-condensing). |
| Storage environment | -10℃～+60℃ ；0%RH～95%RH，non-condensing |
| Package size | 678mm (length) × 548mm (width) × 265mm (height). |
| Accessories | Power cord \*1, ethernet cable \*1, functional checklist \*1, test report \*1, certificate of conformity \*1, packing list \*1, mouse and keyboard set \*1, wireless network card \*1, DP cable \*4, HDMI cable \*1, activation label \*1 (attached to the front panel of the chassis) |

**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) |

Notes

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

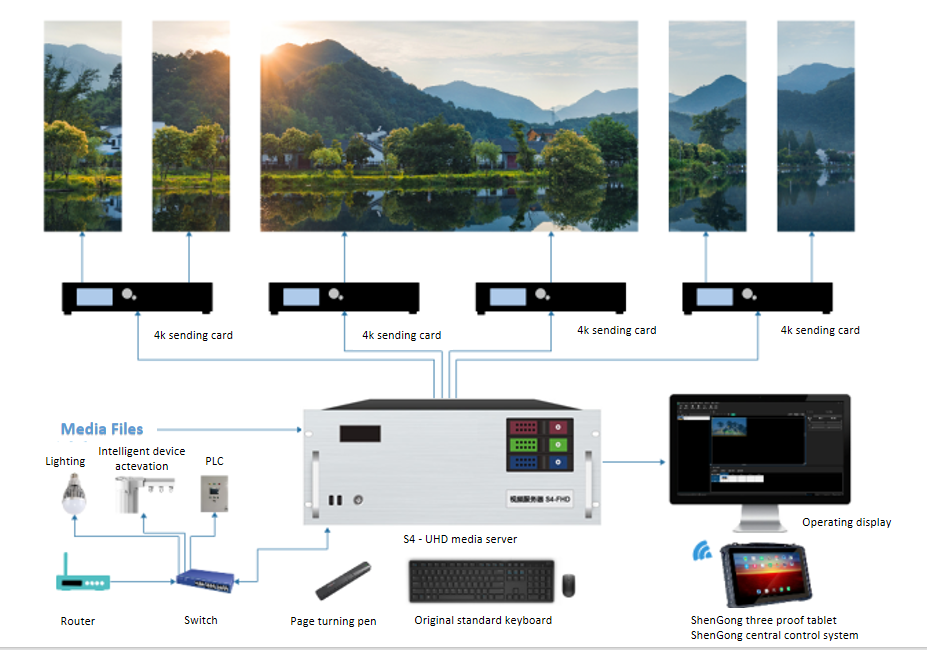
**Function Support**

|  |  |
| --- | --- |
| Feature | Description |
| Mutual primary backup | Support automatic one master multiple backup |
| Master-slave mode | Support automatic one master multi slave |
| Media support | Support PPT, web pages, videos, pictures, audio and other media playback |
| Slice Mask | Supports the import of slice data and mask function |
| Image matting function | Support chroma matting, support custom color matting |
| Cascade | Support multi-machine cascade control |
| Frame synchronization | Support (upgrade required) |
| 3D WEB broadcast control system | Supports multi-terminal control |
| 24-244 Frame rate selection (Insert frame playback) | support |
| Central control System (Standard Edition) | support |
| Echo monitoring system | support |
| Interactive game | support |
| NDI acquisition | support |
| Streaming media | support |
| LTC/NTC time code | Supports receiving and sending time codes |
| DMX512 | Support recording playback and broadcast control by DMX512 signal control. |
| TCP/UDP protocol | It supports sending TCP/UDP control commands and receiving TCP/UDP control commands. |

**Packing List**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Quantity | Specification | Unit |
| Host | 1 | S4-FHD | Unit |
| Power cord | 1 | 1.8m | Strip |
| HDMI cable | 1 | 2m | Strip |
| DP line | 4 | 2m | Strip |
| Wireless network card | 1 | USB wireless card | Piece |
| Keyboard and mouse | 1 | Dual delphinium USB keyboard mouse | Set |
| Certificate | 1 |  | Copy |
| Test report | 1 |  | Copy |
| Functional checklist | 1 |  | Copy |
| Packing list | 1 |  | Copy |

**Application Scenario**



**Notes**

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

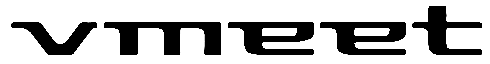
The product can be installed in a standard 19-inch cabinet. The cabinet load requirement is at least four times the weight of all equipment in the cabinet. It needs to be installed with 4 M5 panel screws.

**Statement and Warning**

This is A Class A product, which may cause radio interference in a domestic environment. In such cases, users may be required to take practical measures against their interference.

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