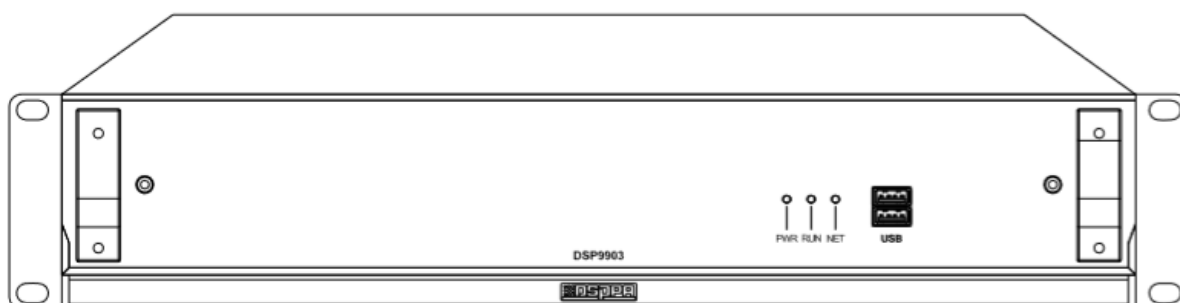




Intelligent School System

A/V All in One Terminal

DSP9903



# User Manual

Thank you for using our DSPPA public address system. Please read this User Manual carefully to make better use of this equipment.

**Guangzhou DSPPA Audio Co., Ltd.**

<http://www.DSPPA.com>  
<http://www.dsppatech.com>

# Matters needing attention



Please read the following before operating the product.



## Warning

The following basic requirements must be strictly observed, to avoid potential personal injury and equipment or property damages to you or any person nearby. The basic requirements include without limitation to the following:

### Power source/power cable

- Please disconnect the device from power source by pulling the plug other than the power cord. Pulling the power cord may result in damages.
- Please keep the power cord away from heat source. Do not over-bend the power cord or place it anywhere it can be stepped on or may cause to trip.
- This is connected to power source via the plug and any failure or danger occurs, the user can disconnect the device from power source by pulling out the plug out from the socket, therefore, it is required that the power socket should be located somewhere with easy access.
- The device is not completely disconnected from power source when it is switched "OFF". For sake of safety, please disconnect the device from the socket if it is not in user.

### Positioning

- Please disconnect the device from power source before relocating the device.
- For avoiding deformation of panels and damages to internal components, please do NOT place the device where there is heavy dust or violent vibration, or where it is extremely cold or hot.
- Please keep this device off water drops or splash or vase filled with water or any other articles of similar nature.

### Connection

- Please disconnect other equipment from power source before they are connected to this product. Please tune volume to its minimum level before the device is powered ON or OFF.
- All terminals on the device marked with ⚡ are live and dangerous, and should be connected by trained personnel.

### When abnormal conditions are realized

- Please disconnect the device from power source immediately in case the power cord is worn or damaged or if the sound is suddenly cut off or any abnormal odor or smoke comes out from the device, and then have the device inspected and repaired by professional personnel.

### Precautions in Operation

- Please do NOT insert any finger into any gap or opening of the device.
- Please prevent foreign objects (paper, plastics or metal etc.) from being inserted or falling into any gap or opening of the device. In such case, please cut off power source immediately.
- Please do NOT put the body or any heavy object on the device and do NOT operate the buttons or switches or connections with excessive force.

### Do NOT open

- Please do NOT remove the cover of the equipment, otherwise you may get an electric shock.
- Do NOT attempt to remove any internal component from the device, or to modify the equipment in whatever manner. In case of any abnormal condition, please stop using the device immediately and have it inspected and repaired by professional personnel.

### Other Precautions

- Our company shall not be responsible for data loss or damages due to improper use of unauthorized modification to the device.
- The images and screen display in this Manual are only for description and may be different from screen images in actual operation. The screen display depends on the product.

# Content

1. Product Description.....	2
1.1 About DSP9903 Terminal.....	2
1.2 Features .....	2
2. Description of Appearance .....	3
2.1 Description of front panel.....	3
2.2. Description of rear panel .....	3
3. Connection Diagram.....	5
3.1 DSP9903/DSP9903A application diagram in system.....	5
3.2 POE6463 connection diagram of interface.....	5
4. Software Operation.....	6
4.1 Log in .....	6
4.2 Function of main interface.....	6
4.3 Device control .....	7
4.4 Recording configuration.....	13
4.6 System upgrading .....	14
4.7 About .....	15
Safety Precautions .....	17
Packing List.....	18
Specification.....	19

# 1. Product Description

## 1.1 About DSP9903 Terminal

DSP9903/DSP9903A is a highly integrated terminal combines transmission and control of audio and video and recording. It has super strong video coding and decoding capacity which could satisfy need of A/V broadcast, interaction, recording and intelligent control. Each classroom could be recording classroom. This is an ideal choice for intelligent schools.

## 1.2 Features

- Built-in A/V software V1.0
- Embedded design, industrial embedded CPU, Linux operation system, top coding and decoding chip, low power consumption, safe and stable
- Support A/V broadcast, 1080P HD output, low bandwidth but high quality coding and decoding
- Support coding and decoding levels such as H.264BP, H.264MP, H.264HP
- Ultra-low coding and decoding delay, delay lower than 300MS
- Support audio and video play on-demand, live and timing playback
- Support double-stream live mode
- Support pure audio broadcast 48KHz sampling, 16 bit decoding of digital audio code stream
- Support recording, three modes: Single scree, Film mode, Three screen
- Two recording and live modes: single stream with multiple screens and resource mode, format supported: MP4, AVI and so on
- Support video matrix, 3 channels of HDMI input, 2 channels of SDI input, 2 channels of HDMI output, 1 VDA output
- Support audio matrix, 2 channels of line input, 2 channels of pickup input, 2 channels of line output
- Support 2.4G wireless MIC, most advanced digital wireless audio technique, high fidelity, clear sound with little noise, super strong pickup ability
- Built-in 2\*30W high fidelity digital amplifier, low power consumption
- Built-in 2 channels of programmable RS232 interface to control on/off status
- Built-in 1 channel of programmable I/O interface to control on/off status of electronic lock
- Built-in 2 channels of 220V AC power output to give power supply to other devices
- Built-in 1 channel of 100M/1000M Ethernet interface
- Support intelligent control of multi-media equipment (computer, high-speed scanner, projector) and environmental equipment (light, air-conditioner, curtain), support remote upgrade and maintain
- Support device inspection, on-time alarm when break down

## 2. Description of Appearance

### 2.1 Description of front panel



#### 1 USB interface (DSP9903A)

DSP9903A supports external USB, keyboard and mouse.

#### 2 Network interface

This indicator will be turned on when host is connected successfully to the network.

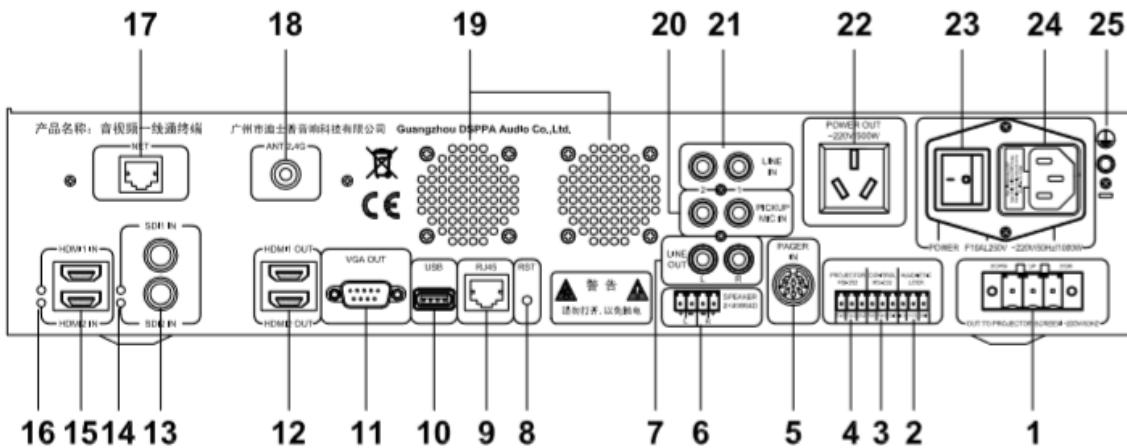
#### 3 Working status indicator

This indicator will be turned on when this device receive the task from host.

#### 4 Power indicator

This indicator will be turned on when there is power supply.

### 2.2. Description of rear panel



#### 1. Projection screen control

This interface is to control the lifting of electronic projection screen. 1-2 are live wires and 3 is null wire.

2. Interface of electronic lock

This interface is to connect with electronic lock. It support lock with status feedback function.

3. Air-conditioner control serial interface

This interface is an RS232 air-conditioner control serial interface to connect with projectors with control interface.

4. Projector control serial interface

This interface is to control RS232 projector control serial interface to connect with projector with control interface.

5. Paging station control

This interface is to connect with desktop paging station (DSP9904).

6. Amplifier output

This interface is a 2-channel amplifier output interface to connect with constant impedance speakers.

7. Line output

To connect with other amplifiers.

8. Resetting button

Long press this button for 5 seconds to restore factory settings. (IP: 172.16.0.100, Subnet mask: 255.255.255.0, Network gateway: 172.16.0.1)

9. Communication network interface

Network communication interface of audio and video broadcast to connect with switch.

10. USB interface

USB upgrading interface to upgrade. Please upgrade according to instruction of upgrading package.

11. VGA output

Support output resolution of 1920\*1080 to connect with projectors.

12. HDMI output

Support 2 channels of HDMI output and 1920\*1080 output resolution. HDMI 1 is to connect with stage display. HDMI 2 is to connect with projection screen.

13. SDI input

Support 2 channels of SDI input. Support input resolution of 1920\*1080. SDI 1 is to connect with teacher tracking camera and SDI 2 is to connect with student tracking camera.

14. SDI input indicator

This interface is to indicate 2 channels of SDI signal. This indicator will be turned on when there is signal.

15. HDMI input

Support 2 channels of HDMI input and input resolution of 1920\*1080. HDMI 1 is to connect with computer and HDMI 2 is to connect with exhibition platform.

16. HDMI input indicator

This interface is to indicate 2 channels of HDMI signal. This indicator will be turned on when there is signal.

17. Built-in computer network interface

Only support DSP9903A. It is to connect network signal of built-in computer to switch.

18. ANT antenna interface

This interface is the external antenna interface of wireless MIC.

19. Fan

20. Pickup MIC input

This interface is to connect with pickup MIC which supports 2 channels of input.

21. Line input

This interface is to connect external audio. Support 2 channels of input.

22. Power of projector

This interface is the power supply interface of projector.

### 23. Power switch

This interface is to control the on/off AC220V power.

### 24. Power supply interface

AC220V power supply interface. When connecting, please connect 电源输入接口, 连接时请先将电源线与机器接好, 再接入电网中。

### 25. Ground terminal

## **3. Connection Diagram**

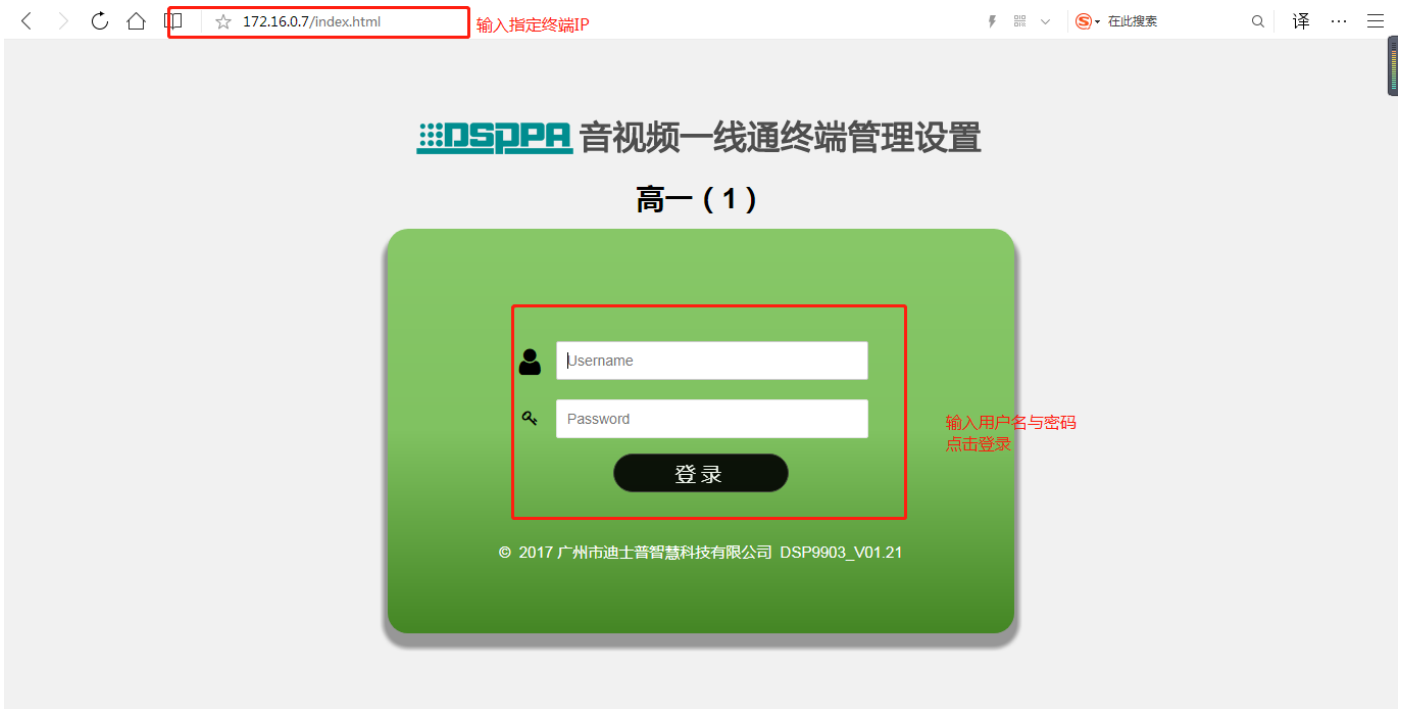
### **3.1 DSP9903/DSP9903A application diagram in system**

### **3.2 POE6463 connection diagram of interface**

## 4. Software Operation

### 4.1 Log in

This is the login interface of the software. Users only need to enter IP in the Browser. Then enter user name and password to log in.



Login Interface

### 4.2 Function of main interface

The following interface is the management interface which contains five modules:

Device control: to realize video switch, volume adjustment, intelligent control and linkage control

Parameter configuration: to set up Network and Serial interface

Recording configuration: to control playback and recording

System upgrading: to upgrade current system

About: to display information of the device





Main interface

### 4.3 Device control

#### 1) Video Switch

You can control video switch on this interface. There is an original interface to display current status. By switching among buttons, you can control video displayed.

Projection output: there are four options- built-in computer, external HDMI, physical exhibition platform and broadcast source. You can choose to control display of different projection screens.

Stage screen: there are four options- built-in computer, external HDMI, physical exhibition platform and broadcast source. You can choose the one you want to control.

PPT lock: PPT is locked under live, interaction and recording mode. When it is not locked, it will show (not exist).



Video Switch (with PPT)

### 2) Volume control

You can control master volume on the interface. There will be an original value. You can slide the bar to control the volume.



Volume control

### 3) Intelligent control

The current status will be shown on the original interface including device and serial port control:

On/Off switch projector power, magnetic lock and built-in computer

Projection screen: to control the lifting, descending and stop

Projector control: to control on/off of projector and video signal



Intelligent control

4) Air-conditioning control

Enter the interface and you can control mode, temperature and on/off status.



Air-conditioning control

5) Network configuration

This interface contains remoter communication server, remote recording server, and parameter configuration.

When opening the interface, you will receive original value sent by server.

Remote communication server: to change IP and parameters.

Remote recording server: to modify parameters.

Local configuration: to configure Network parameters.



### Network Configuration



### Local configuration

#### 6) Serial interface configuration

Projector control: when the function is closed, the parameter is locked and cannot be changed. In addition, the projector is gray and cannot be controlled. When the function is opened, parameter and projector could be controllable.



### Serial interface configuration

#### 7) Paging station linkage

When paging station is connected to terminal, interface will show its status.



### Configuration support

#### 8) Disable and enable of device

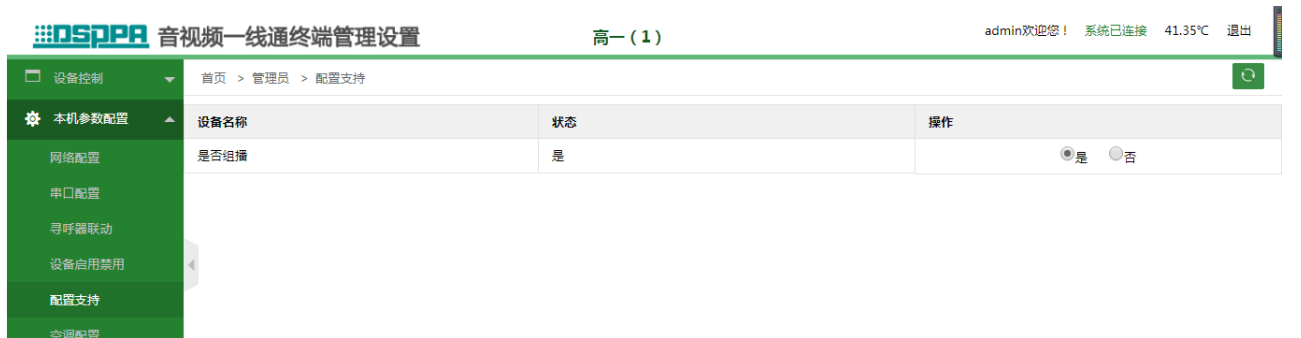
You can choose whether to enable device on this interface.



Disable and enable device

9) Configuration support

You can choose to play in single group or multiple groups.



Configuration support

10) Air-conditioning configuration

You can configure parameters of air-conditioning including infrared code and others.

Air-conditioning configuration

## 4.4 Recording configuration

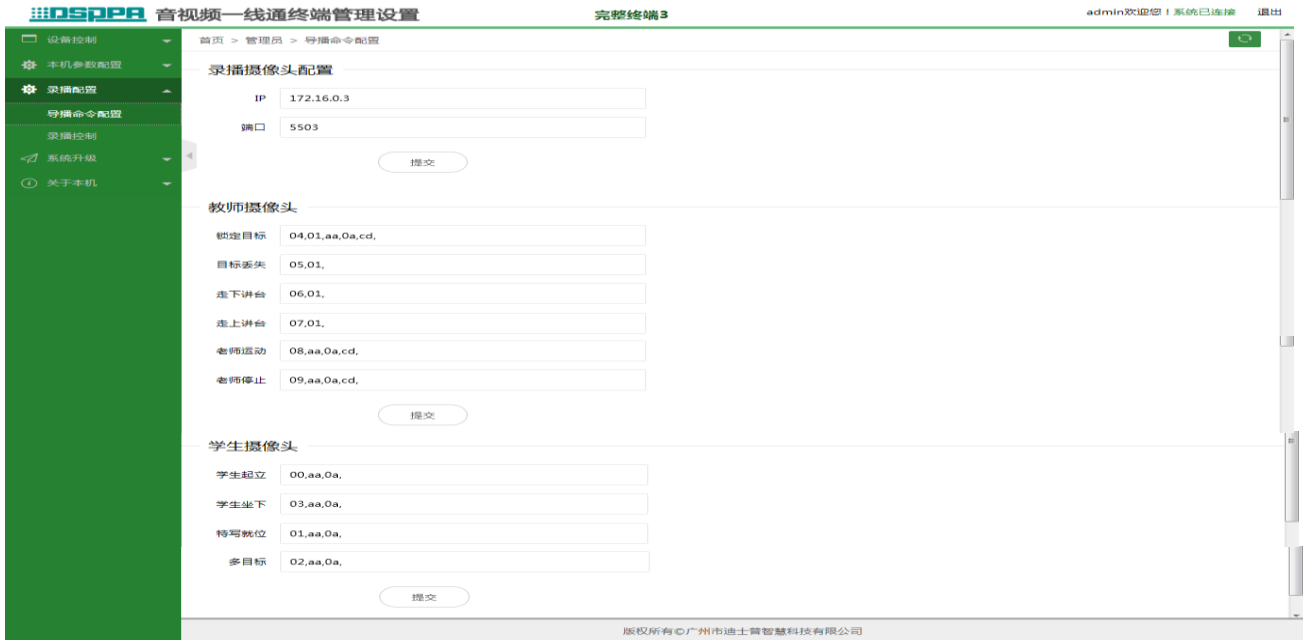
### 1) Recording command configuration

The original status is shown on the interface, mainly including recording camera configuration, teacher tracking camera and student tracking camera.

Recording camera configuration: to modify camera IP and interface parameters.

Teacher tracking camera: to send command to control the camera.

Student tracking camera: to send command to control the camera.



Recording command configuration

2) Recording control

The original status is shown on the interface, mainly including detection time of PPT and camera.



Recording control

## 4.6 System upgrading

There are two main functions on the interface: version No. (cannot be changed) and system upgrading. System upgrading: to upload upgrading files and upgrade.





### System Upgrading

## 4.7 About

Version No. will be shown on the interface. You can reboot and restore factory settings.

Version no. cannot be changed.



### About this device

**DSPPA 音视频一线通终端管理设置** 高一(1) admin欢迎您! 系统已连接 41.35°C 退出

设备控制 | 本机参数配置 | 录音配置 | 系统升级 | 关于本机

本机系统版本信息

在线状态

首页 > 管理员 > 在线状态

名称	状态
功放板	已连接
寻呼器	未连接

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Online status

# Safety Precautions

## 1. Safety Precautions

- Please do NOT connect this device to the power source, before the system is correctly wired.
- It is important to ensure that input voltage to the device is the same as required voltage of the device, otherwise the device may be damaged.
- There is dangerous voltage in the device, which may cause personal electric shock. Please do NOT open the case without permission, to avoid potential risks of electric shock.
- The device is not completely disconnected from power source when it is switched "OFF". For sake of safety, please disconnect the device from the socket if it is not in use.
- Please do NOT place the device where it is extremely cold or hot.
- Good ventilation must be provided in the working environment of the device, to avoid excessive temperature during its operation, which may cause damages to the device.
- Please unplug the device from power socket in raining and wet days or if the device is not in use for a long time.
- Please disconnect the power plug from sockets, to ensure the device has been completely disconnected from power source, before any component is removed from or re-installed in the device or before any electric connector of the device is disconnected or reconnected.
- In case of any failure of the device, please do NOT open the case and repair without permission from a professional personnel, to avoid accident or additional damages to the device.
- Please do NOT place any corrosive chemicals near or on the device.

## 2. Matters needing attention

- Our company provides a three-year free warranty service (including free replacement parts) over quality issues as from the date of purchase, provided that the device is installed and used in accordance with requirements specified in the User Manual.
- For warranty, the user must show the Warranty Card and the receipt kept by the user and purchase invoice of the device as supporting documents.
- The following conditions are beyond the scope of warranty:
  1. Product damage due to improper installation, use or handling;
  2. Product damage due to abnormal conditions (such as excessive power source voltage or ambient humidity);
  3. Product damage due to acts of God;
  4. Product SN is changed, altered or removed;
  5. Product has been repaired or modified by any person without duly authorization from our company;
- Please keep the User Manual and Warranty Card in good custody.
- For issues and precautions not mentioned in this User Manual, if required, please contact the distributor or visit our website at <http://www.dsppatech.com>.
- In case of any failure in the warranty period, please contact service personnel (or distributor) of our company for service. The company shall not be made liable for damages due to unauthorized dis-assembly or maintenance or service by unauthorized personnel.

## Packing List

No.	List	Quantity
1	2.4G Microphone, charger, lanyard	1
2	9P green interface	1
3	4P green interface	1
4	Projection screen power 3P plug (White)	1
5	10A international standard MP-P power cable	1
6	1m Network Cable	1
7	Audio cable with RCA plug	4
8	5×19 countersunk head screw (Silver)	4
9	Washer (Black)	4
10	User Manual	1
11	Certificate	1
12	Warranty Card	1
13	Converter	2
14	ANT antenna	1
15	A/V terminal	1

# Specification

Note: The performance specifications are subject to changes without further notification.

Item		Parameter
LINE IN	Input sensitivity	300±20mV
	Input dynamic range	20dB
Pickup MIC input	Input sensitivity	300±20mV
	Input dynamic range	20dB
LINE OUT	Output level	1000±50mV
	Frequency response	20Hz~20KHz (±0.5dB)
	THD	≤0.05%
	SNR	77 dB
Stereo Amplifier output	Output channel	L/R Channel
	Output rated power	L=40W/4Ω, R=40W/4Ω,
	Output frequency response	20Hz~20KHz (±2dB)
	Output THD	≤0.5%
Network program playback	Output sensitivity	250±20mV
HDMI input		1920*1080@60 1920*1080@30
HDMI output		1920*1080@60
SDI input		1920*1080@60 1920*1080@30
VGA output		1920*1080@60
Dimension (L×W×H mm)		483×88×430
Net weight		8.45kg

**Caution**

- The device is not completely disconnected from power source when it is switched "OFF". For sake of safety, please disconnect the device from the socket if it is not in use.
- Please keep this device off water drops or splash or vase filled with water or any other articles of similar nature.
- Please do NOT remove the cover of the equipment, otherwise you may get an electric shock. Where necessary, repair to the equipment should be conducted by qualified professionals.
- All terminals on the device marked with ⚡ are live and dangerous, and should be connected by trained personnel.

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