



# ***Interactive Video Player***

***K4000S Specifications***

## CONTENT

<i>1.Product Overview.....</i>	<i>1</i>
<i>Product Introduction .....</i>	<i>1</i>
<i>Product Features.....</i>	<i>1</i>
<i>2.Product Functions .....</i>	<i>2</i>
<i>Functions.....</i>	<i>2</i>
<i>Source Format.....</i>	<i>2</i>
<i>Device Management.....</i>	<i>3</i>
<i>DMX512 Illustration .....</i>	<i>3</i>
<i>Using USB Flash Drive to Import the Source .....</i>	<i>5</i>
<i>3.Product Parameters.....</i>	<i>6</i>
<i>Basic Parameters .....</i>	<i>6</i>
<i>Hardware Introduction.....</i>	<i>6</i>
<i>Connections Illustration( Ports).....</i>	<i>6</i>
<i>Buttons on Front Panel .....</i>	<i>7</i>
<i>Dimensions .....</i>	<i>8</i>
<i>4.Product Specifications.....</i>	<i>9</i>
<i>Basic Specs.....</i>	<i>9</i>
<i>Precautions.....</i>	<i>9</i>

# Updates History

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<i>File Version</i>	<i>Release Date</i>	<i>Update History</i>
V1.0	2022/11/07	First Release

深圳市摩西尔电子有限公司

# 1 Product Overview

## Product Introduction

K4000S features a high-performance multi-core processor with a main frequency of 1.8G, onboard 4G RAM, and 64G EMMC internal storage. It has powerful image processing capabilities and H264\H265 high-definition video hardware decoding capabilities. K4000S integrates video processing and LED sending card, supports 1x HDMI input, 1x HDMI output, 4x Gigabit network port outputs, with a maximum load of 2.6 million pixels, it is suitable for KTV, party rooms, bars, etc. It supports the standard DMX512 lighting protocol, supports sounds and audio detection, automatically switches scene materials, and uniformly schedules lighting, music, and video images to create an immersive atmosphere.



## Product Features

- Support 1x HDMI input, can create windows independently, and can also be superimposed and played with other screens
- It features 4 LED OUTs and handles the maximum 2.3 million pixels in total.
- Support 1x HDMI output, the picture can be spliced, and the cascade sending card or video processor can be expanded.
- It supports to play the HD video or pictures and supports scaling, picture in picture or picture out picture.
- The device can be connected to the PC so as to use the WEB management function(website), with that the operation will be a lot easier.
- It can be connected with karaoke players and intelligent central controllers of different manufacturers.
- It supports to have 8 windows and the position or size of the windows can be adjusted, also the window can be superimposed.
- To switch the scenes with the buttons on the panel, DMX 512 Control and Audio Detection(to automatically open the window).
- Embedded hardware architecture, with a stable operation and is low power consumption

## ***Application Scenarios***

*Select the corresponding scene mode through the wall panel buttons or automatically analyze the audio drum beats. The music, video, and lighting of each mode are arranged in the same way, realizing the sound and light synchronization experience. It can be widely used in LED screens in KTV private rooms and bars and karaoke halls, and will be with significant advantages.*

# 2 *Function Introduction*

## **Product Features**

- *Built-in 64G EMMC internal storage, preinstalled a variety of scenes, and it runs automatically when it's turned on.*
- *It supports Gigabyte Ethernet Communication or LAN Connection.*
- *There's 1x HDMI and can output images independently+4 LED OUTS, the image can be spliced to 3840\*1080.*
- *It supports HDMI input+foreground+background,multiple layer overlay and picture in picture,picture outside picture.*
- *The HDMI signal from the external Karaoke Player can be displayed on the led screen with PIP operation, and the signal source can be switched.*
- *Visualized WEB operation, the position or size of the window can be freely adjusted and support to manage the source library.*
- *It support to have the windows in any combination,up to 8 windows can be created.*
- *It supports to set the transparency of the window.*
- *It supports the smooth and seamless superimposed playback of the text,image,video.*
- *It has multiple playback modes,such as:loop playback and command playback.*
- *It supports to adjust the brightness,red, green,blue color of the led screen.*
- *It supports video rotation at any angle, zoom, strobe, tiling, double speed and other special effects.*
- *It supports to use the USB Flash drive to update materials, and support three material copy methods: overwriting, clearing and appending.*
- *It supports the standard DMX512 lighting protocol, and to be connected with the Karaoke System so as to realize the linkage(interaction) of the video,music and lighting.*
- *It supports to manually switch the scene materials with the buttons on the wall panel.*

## **Format Requirements for signal source**

<i>Video Format</i>	<i>MP4</i>
<i>Video Coding</i>	<i>H.264/H.265</i>
<i>Video Frame Rate</i>	<i>Recommended: 30fps</i>
<i>Video Resolution</i>	<i>Recommended:1920*1080</i>
<i>Video Bit Rate</i>	<i>Max Video Rate: 10000bps</i>
<i>Picture Format</i>	<i>JPG、JPEG、PNG,etc.</i>

## Device Management

<i>Network Communication</i>	<i>LAN</i>
<i>Program Updating</i>	<i>Network or U Disk</i>
<i>Terminal Device</i>	<i>PC or other Intelligent Terminal Devices</i>
<i>Software Management</i>	<i>The device comes with a web sever, and the terminal can access the device through a browser</i>

## DMX 512 Channels Illustration

<i>CH</i>	<i>Function</i>	<i>Channel Value</i>	<i>Illustration</i>
1	<i>Foreground Folder</i>	<i>1~255</i>	<i>Select the foreground directory, corresponding to 001~255 folders, 0 is empty</i>
2	<i>Foreground Folder</i>	<i>0</i>	<i>Randomly play the materials in the folder (no matter what mode the web is set to)</i>
		<i>1~255</i>	<i>Uni cast mode: the specified material is played in a loop Sequential mode: play the material with the specified value first, and then play other materials in sequence Random mode: play the material with the specified value first, and then play other materials randomly</i>
3	<i>Background Folder</i>	<i>1~255</i>	<i>Select the background directory, corresponding to 001~255 folders, 0 is empty</i>
4	<i>Background Material</i>	<i>0</i>	<i>Randomly play the materials in the folder (no matter what mode the web is set to)</i>
		<i>1~255</i>	<i>Uni cast mode: the specified material is played in a loop Sequential mode: play the material with the specified value first, and then play other materials in sequence Random mode: play the material with the specified value first, and then play other materials randomly</i>
5	<i>Background Light Adjustment</i>	<i>0~255</i>	<i>0: turn off the light, 1~255 increases the brightness proportionally, 255: maximum</i>
6	<i>Background Light Adjustment</i>	<i>0~255</i>	<i>0: turn off the light, 1~255 increases the brightness proportionally, 255: maximum</i>
7	<i>Strobe</i>	<i>0~255</i>	<i>0: no strobe, 255: the fastest (the slowest is 1 frame/s, the fastest is 30 frames/s)</i>
8	<i>RED</i>	<i>0~254</i>	<i>Brightness adjustment of red color during playback, 0: no red</i>

		255	The entire led screen is pure red
9	GREEN	0~254	Brightness adjustment of green color during playback, 0: no green
		255	The entire led screen is pure green
10	BLUE	0~254	Brightness adjustment of blue color during playback, 0: no blue
		255	The entire led screen is blue
11	Play Speed	0~255	Play speed: 15 levels of speed
12	PIP	0 21~30	No window
		1~10 41~50	Enable the HDMI window of the HDMI OUT1 port
		11~20 51~60	Enable the HDMI window of the HDMI OUT2 port
		31~40 250~255	Simultaneously enable the HDMI window of the HDMI OUT1/OUT2 port
		61~249	Current Status: Closed
13	Scaling(ZOOM)	0	Original Resolution(scale):(window is not scaled)
		1~50	Enlarged (Zoom IN)
		51~100	ZOOM OUT
		101~150	Zoom Out dynamically
		151~200	Zoom in dynamically
		201~255	Dynamically zoom in and zoom out
14	Rotation	0	Normal
		1~63	0~360 Static Rotation
		64~127	0~360 clockwise infinite rotation, the larger the value, the faster
		128~191	0~360 counterclockwise infinite rotation, the larger the value, the faster
		191~255	Rotate one circle clockwise and one circle back, the larger the value, the faster
15	Tiling	0	Normal
		1~50	Tile Matrix 1*2
		51~100	Tile Matrix 1*3
		101~150	Tile Matrix 2*2
16	Jitter	0~255	Currently closed
17	Reserved	0~255	Currently closed
18	Reserved	0~255	Currently closed
19	Reserved	0~255	Currently closed
20	Reserved	0~255	Currently closed

**Using the USB Flash Drive to Import the materials**

Create a third-level folder in the root directory of the USB Flash Drive:

- 1、MBBox/ktv/XXX
- 2、MBBox/ktv\_add/XXX
- 3、MBBox/ktv\_clear/XXX

*Note: Ktv、ktv\_add、ktv\_clear folders, among them only one of three can be chosen, and they cannot exist at the same time.*

*The XXX folder name is 001~255, copy the material files into the corresponding XXX folder*

*Three ways to import:*

*ktv (overwrite copy): the material in the USB Flash Drive directory will overwrite the same material in the corresponding directory of K4000S*

*ktv\_clear (clear copy): If there is XXX directory in the USB Flash Drive, clear the corresponding directory of K4000S, and then copy the material*

*ktv\_add (add copy): If there is a YY file in the XXX directory in the USB Flash Drive, and there is a file with the same name in the corresponding directory of K4000S, a number will be added in front of the same file name in the USB Flash Drive, and then copied, without affecting the original material*

# 3 Product Parameters

## Basic Parameters

Performance	High Performance: CPU+GPU RAM 4G DDR4 High Speed Storage Internal storage: 64G EMMC high-speed storage
Network access method	Ethernet port
Video Port	1*HDMI Input, 1*HDMI Output, 4*LED OUTS( Ethernet Ports)
Processing Capability	With 4 LED OUTS and it can be connected to Mooncell Receiving cards and it handles 2.3 Million Pixels.
Cascading Connection Extension	1* Standard HDMI output, and it can be cascading connected to the sending card.

## Hardware Introduction



## Interface Illustration

Interface Name	Illustration
LAN	Gigabyte Ethernet Access
HDMI IN	1*HDMI Input
HDMI OUT	2* HDMI Output, resolution of each will be :1920*1080P
USB	1 *USB2.0+1*USB3.0 Ports, (USB Disk, Mouse could be connected to)
LED OUT	4 LED OUTS ,it handles 2.3 million pixels in total
DMX512 Interface	2 *RJ45 DMX512 interfaces, directly connected with KTV intelligent control to

	<i>realize sound and light interaction</i>
<i>RS485 Interface</i>	<i>2* RJ45 568B standard, connect the wall panel to switch the scene</i>
<i>AUDIO Input/ Output</i>	<i>2 groups of audio input and output interfaces: Group 1, disc player audio input: XLR/RCA, audio output: RCA Group 2, VOD audio input: RCA, audio output: RCA share 1 group of RCA output, connect to the audio interface of the smart central controller, real-time audio inspection, realize sound and light linkage(interaction).</i>
<i>100-220V AC Power</i>	<i>Input Power Port: AC 100-220V 50/60Hz</i>
<i>CONFIG</i>	<i>Set the LED display parameters through the B-type USB interface on the front of the chassis</i>

## Front Panel Keys



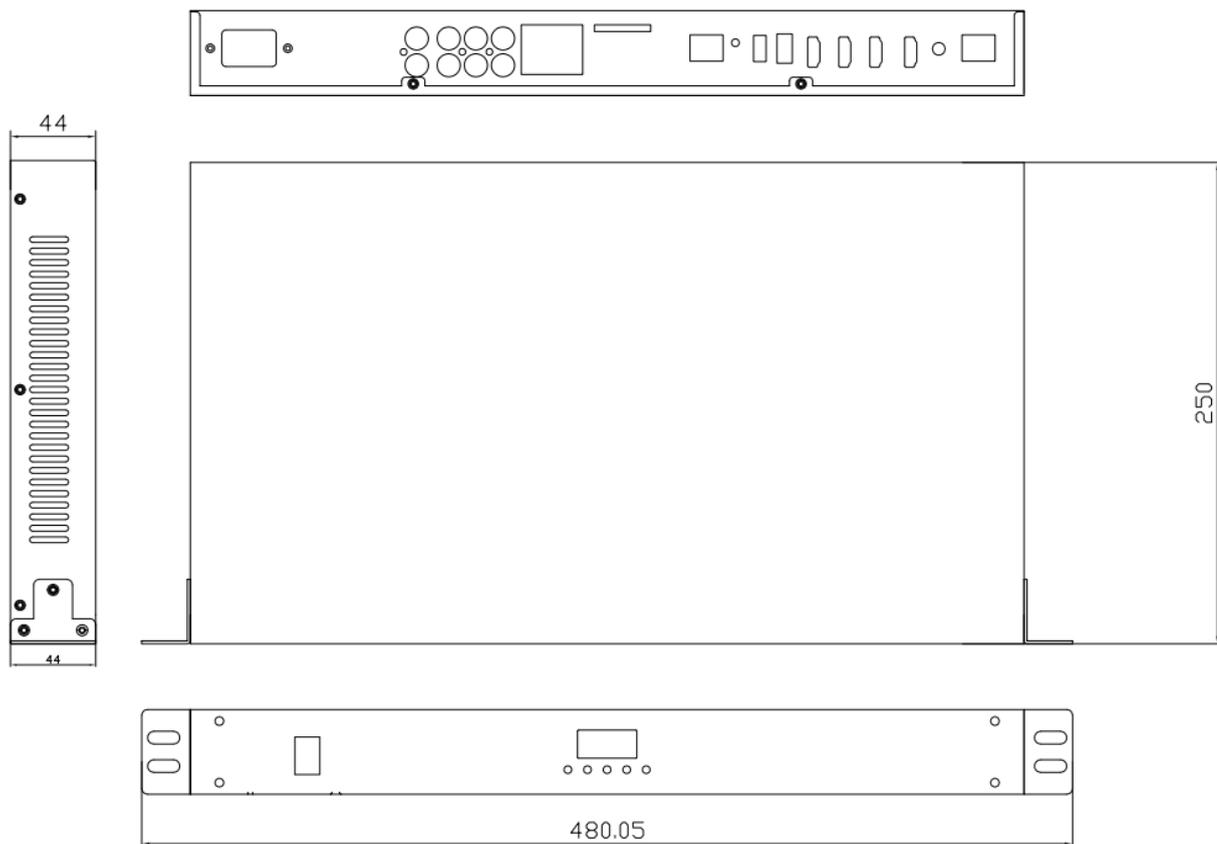
<i>Name</i>	<i>Indicator Illustration</i>
<i>Add</i>	<i>Increase the Value</i>
<i>Minus</i>	<i>Decrease the value</i>
<i>Menu</i>	<i>menu selection key</i>
<i>Confirm</i>	<i>After selecting the function and setting value, press the enter key to save</i>
<i>ESC</i>	<i>Exit menu selection</i>

## Menu code value description

<i>Menu Code Value</i>	<i>Illustration</i>
<i>0102</i>	<i>Under normal circumstances, the digital tube displays 4 digits. The first 2 digits (01): represent the directory, and the last two digits (02): represent the material number in the directory</i>
<i>A001-A512</i>	<i>Represents the address code of the controller</i>
<i>-FE- -DE-</i>	<i>512 Receive mode selection: normal use DE to receive</i>

## Product Dimensions

Unit:MM



# 4 Product Parameters

## Parameters

<i>Electric Parameters</i>	<i>Input Voltage</i>	<i>AC 100-220V 50/60Hz</i>
	<i>Rated Power</i>	<i>15W</i>
<i>Working Environment</i>	<i>Working Temperature</i>	<i>-20 °C - 65 °C</i>
	<i>Working Humidity</i>	<i>10%RH-90%RH No solidification</i>
<i>Dimensions</i>	<i>Unit Dimensions: 430mm x 250mm x 44mm</i>	
<i>Net Weight</i>	<i>3 kg</i>	
<i>Peripherals</i>	<i>220V PowerCord*1, HDMI Cable *2, Network Cable*1, USB Cable*1</i>	

### **Precautions:**

*The installation process must be completed by professionals.*

*High voltage danger: The working voltage of this product is AC -100V~240V.*

*Must be anti-static.*

*Please pay attention to waterproof and dust-proof.*