Mooncell

K2300S Interactive Video Player

Specification V3.1

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1 Product Overview

Product Introduction

K2300S adopts high-performance multi-core processor, main frequency 1.8G, onboard 4G RAM, 64G EMMC internal storage, powerful image processing capability and H264\H265 HD video hard decoding capability. K2300S supports 2 HDMI input and 3 HDMI output interfaces. It integrates computer, central controller and video player. It is simple in configuration and flexible in application. Instructions to play different scene videos, and can strobe according to instructions or low-frequency drum beats of music, suitable for KTV and bar rooms.

Product Features

- Support 2*HDMI input, can be superimposed with Android Windows
- Support 3*HDMI output, the screen can be spliced
- 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 multiple 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 , audio detection switch window and DMX512 control function
- 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.
- There are 3 HDMI and both can output images independently, the image can be spliced to 5760*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 12 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.
- Support 5D Fusion and splicing.

Format Requirements for signal source

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

Device Management

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

DMX 512 Channels Illustration

CH	Function	Channel Value	Illustration
1	Foreground Folder	1~255	Select the foreground directory, corresponding to 001~255 folders, 0 is empty.Channels 1 and 3 cannot be 0 at the same time, and the 51 directory is to remove the black background.
2	Foreground Folder	0	Randomly play the materials in the folder (no matter what mode the web is set to)
		1~255	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
3	Background Folder	1~255	Select the foreground directory, corresponding to 001~255 folders, 0 is empty.Channels 1 and 3 cannot be 0 at the same time, and the 51 directory

			is to remove the black background.
4	Background Material	0	Randomly play the materials in the folder (no matter what mode the web is set to)
		1~255	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
5	Background Light Adjustment	0~255	0: turn off the light, 1~255 increases the brightness proportionally, 255: maximum
6	Background Light Adjustment	0~255	0: turn off the light, 1~255 increases the brightness proportionally, 255: maximum
7	Strobe	0~255	0: Off, 1-32 All, 33-64 Foreground, 65-96 Background: Proportionally increase the stroboscopic speed, (the slowest is 1 frame/s, the fastest is 30 frames/s)
8	RED	0~254	Brightness adjustment of red color during playback, 0: no red
		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	All	0-10: normal, 11-20:2 times speed, 21-30:1.5 times speed, 31-40:0.8 times speed, 41-50:0.5 times speed, 51-60: suspended
		Foreground	0-10: normal, 11-20:2 times speed, 21-30:1.5 times speed, 31-40:0.8 times speed, 41-50:0.5 times speed, 51-60: suspended
		Background	0-10: normal, 11-20:2 times speed, 21-30:1.5 times speed, 31-40:0.8 times speed, 41-50:0.5 times speed, 51-60: suspended
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), 1-10: The image is enlarged to scale, up to 3 times. 11-20: The image is scaled down to a minimum of 1 pixel. 21-30: The video is rolled back to the original window ratio of 1 pixel. The

			larger the value, the faster the rollback speed. 31-40: After the original scale of the video is enlarged by 3 times, the scale is rolled back. The larger the value, the faster the rollback speed. 41-50: The video is scaled back after 1 pixel is enlarged by 3 times. The larger the value, the faster the rollback speed.
		51~100	ZOOM OUT, 51-60: The foreground image is scaled up to 3x. 61-70: The foreground image is scaled down to a minimum of 1 pixel. 71-80: The foreground video is rolled back in a ratio of 1 pixel to the original window. The larger the value, the faster the rollback speed. 81-90: The original scale of the foreground video is rolled back after being enlarged by 3 times. The larger the value, the faster the rollback speed. 91-100: The foreground video is scaled back after 1 pixel is enlarged by 3 times. The larger the value, the faster the rollback speed.

		101~150	Zoom Out dynamically, 101-110: The background image is scaled up to 3x. 110-120: The background image is scaled down to a minimum of 1 pixel. 121-130: The background video is rolled back to the original window ratio of 1 pixel. The larger the value, the faster the rollback speed. 131-140: The original scale of the background video is rolled back after being enlarged by 3 times. The larger the value, the faster the rollback speed. 141-150: The background video is scaled back after 1 pixel is enlarged by 3 times. The larger the value, the faster the rollback speed.
14	Rotation	0	Normal
		1~40	1-10: Rotation from 0 ° to 360 ° (static) 11-20:0 °~ 360 ° rotate clockwise, the larger the value, the faster the speed 21-30:0 °~ 360 ° rotate counterclockwise, the larger the value, the faster the speed 31-40:0 °~ 360 ° Rotate 1 turn clockwise and then 1 turn counterclockwise (repeat), the larger the value, the faster the speed.

		41~90	41-50: No rotation 51-60: Rotation from 0 ° to 360 ° (static) 61-70:0 °~ 360 ° rotates clockwise, the larger the value, the faster the speed. 71-80:0 °~ 360 ° rotate counterclockwise, the larger the value, the faster the speed 81-90:0 °~ 360 ° Rotate 1 turn clockwise and then 1 turn counterclockwise (repeat), the larger the value, the faster the speed.
		91~140	91-100: No rotation 101-110: Rotation from 0 ° to 360 ° (static) 111-120:0 °~ 360 ° rotates clockwise, the larger the value, the faster the speed 121-130:0 °~ 360 ° counterclockwise rotation, the larger the value, the faster the speed 131-140:0 °~ 360 ° rotate 1 turn clockwise and then 1 turn counterclockwise (static), the larger the value, the faster the speed
15	Tiling	1-16	1: Tile matrix 1x2 2: Tile matrix 1x3 3: Tile matrix 1x4 4: Tile matrix 2x1 5: Tile matrix 2x2 6: Tile matrix 2x3 7: Tile matrix 2x4 8: Tile matrix 3x1 9: Tile matrix 3x2 10: Tile matrix 3x3 11: Tile matrix 3x4 12: Tile matrix 4x1 13: Tile Matrix 4x2 14: Tile Matrix 4x3 15: Tile Matrix 4x4 16: Full Off

		17-32	17: Tile matrix 1x2 18: Tile matrix 1x3 19: Tile matrix 1x4 20: Tile matrix 2x1 21: Tile matrix 2x2 22: Tile matrix 2x3 23: Tile matrix 2x4 24: Tile matrix 3x1 25: Tile matrices 3x2 26: Tile matrices 3x3 27: Tile matrices 3x4 28: Tile matrices 4x1 29: Tile Matrix 4x2 30: Tile Matrix 4x3 31: Tile Matrix 4x4 32: Full Off
		33-48	33: Tile matrices 1x2 34: Tile matrices 1x3 35: Tile matrices 1x4 36: Tile matrices 2x1 37: Tile matrices 2x2 38: Tile matrices 2x3 39: Tile matrices 2x4 40: Tile matrices 3x1 41: Tile matrix 3x2 42: Tile matrix 3x3 43: Tile matrix 3x4 44: Tile matrix 4x1 45: Tile Matrix 4x2 46: Tile Matrix 4x3 47: Tile Matrix 4x4 48: Full Off
16	Audio switching	0~255	0: Available wall panel control 1-10: Switch VOD channel 11-20: Switch DJ channel
17	Special effects	0	closed
		1-20	1-10: From slow to fast, top left to bottom right jitter 11-20: Random jitter from slow to fast 41-50: Slide left to right to enter, slow to fast to enter, and then stop after bouncing 51-60: Slide left to right to enter, slow to fast to enter, bounce and loop

		21-80	21-30: Slide from right to left to enter, slow to fast to enter, and then stop after bouncing 31-40: Slide from right to left to enter, slow to fast to enter, bounce and loop 41-50: Slide left to right to enter, slow to fast to enter, and then stop after bouncing 51-60: Slide left to right to enter, slow to fast to enter, bounce and loop 61-70: Slide from top to bottom to enter, slow to fast to enter, and then stop after bouncing 71-80: Slide from top to bottom to enter, slow to fast to enter, bounce and cycle
		81-120	81-90: Page rotation from left to right center, slow to fast page 360 and then stop 91-100: Turn the page from left to right center, turn the page from slow to fast 360 and cycle 101-110: Page rotation from right to left center, slow to fast page 360 and then stop 111-120: Turn pages from right to left center, turn pages from slow to fast 360 and cycle
18	Screen Running Group	0~100	The higher the number, the faster it is.
19	Screen Slicing	0~50	The higher the number, the faster it is.
20	Reserved		

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 K2300S

ktv_clear (clear copy): If there is XXX directory in the USB Flash Drive, clear the corresponding directory of K2300S, 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 K2300S, 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 DDR3 High Speed Storage: Internal storage: 64G EMMC high-speed storage
Network access method	Ethernet port
Video Port	2*HDMI Input，3* HDMI Output
Supported Sending Card	Standard HDMI Output，support the sending cards of all brands

Hardware Introduction

Interface Name	Illustration
100-220V AC Power	Input Power Port：AC 100-220V 50/60Hz
LAN	Gigabyte Ethernet Access
USB	2*USB3.0 Ports，(USB Disk, Mouse could be connected to)
HDMI IN	2*HDMI Input
HDMI OUT	3* HDMI Output,resolution of each will be :1920*1080P
DMX512	2 *RJ45 DMX512 interfaces, directly connected with KTV

Interface	intelligent control to realize sound and light interaction
RS485 Interface	2* RJ45 568B standard, connect the wall panel to switch the scene
TTL Interface	1* RJ45 568B standard, connect the wall panel to switch the scene
AUDIO Input/ Output	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).

Front Panel Keys

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

Menu code value description

Menu 1: dmx512 address

Control the start address of the dmx512 channel by addition and subtraction

Menu 2: Filter frame number

Set dmx512 to filter data, the default is 3.

Menu 3: DHCP Settings

- Entering the menu will automatically cycle the ip display (the ip obtained when powered on needs to be re-acquired if there is an update). The first data 01 represents static, and 00 represents dynamic.
- The following figure shows the static IP 192.168.1.100

Enter the settings interface through addition and subtraction

0: Open DHCP；1: Disable DHCP ； 2: Get the IP.

Menu 4: Log Save Settings

1 is not saved，0 to save

Menu 5: HDMI IN selection and status

1. Press the F menu to display 1, which means that HDMI IN 1 is currently plugged in. If it displays 2, it means that it is currently HDMI IN 2.

2. When the device HDMI IN has only one signal, the device will

automatically select the one with the signal to display. When the device has signals from both channels of HDMI IN, you need to select 1 or 2 through the menu and then press Confirm to select.

Menu 6: G Menu Drum Coefficient

Set drum source data coefficient, default 6

Menu 7: H Menu Drum Data

H menu drum data minimum, default 40

Menu 8: I Menu Drum Data

I menu drum data maximum, default 140

Menu 9: J Menu MCU Status

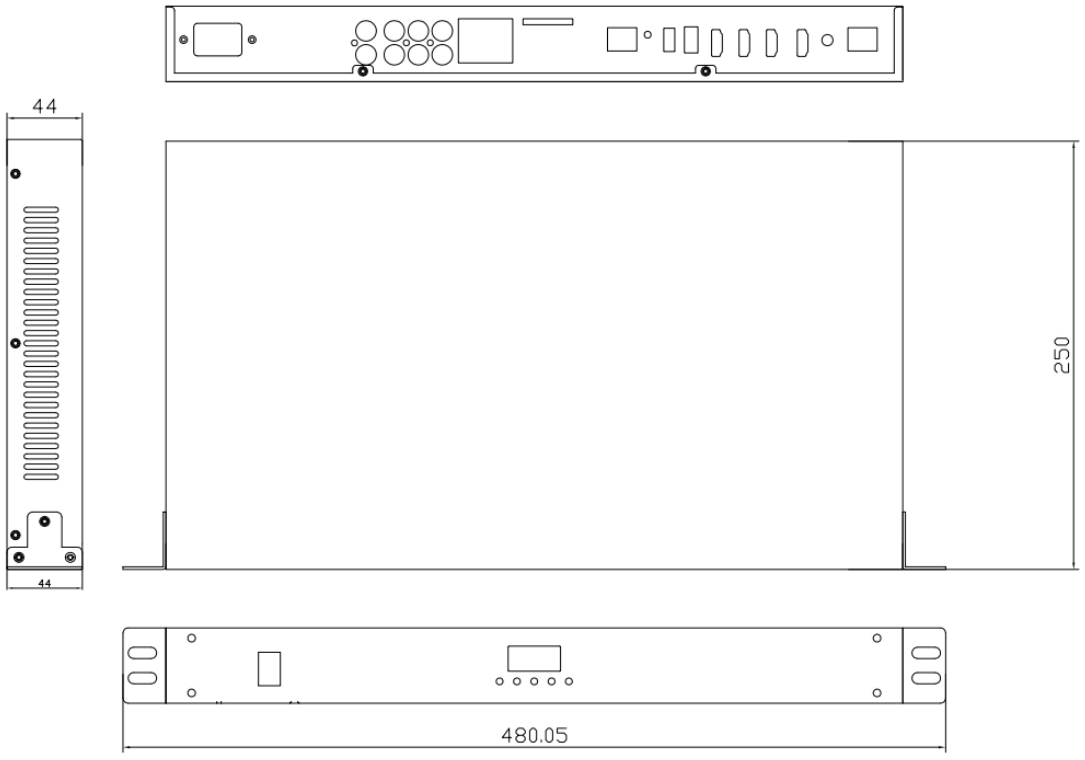
J menu MCU status, display the status code according to different configurations, no need to adjust by default

Menu 10: K Menu DB Settings

K menu db setting is smaller or negative, the default is 3.

Product Dimensions

Unit:MM



4 Product Parameters

Parameters

Electric Parameters	Input Voltage	AC 100-220V 50/60Hz
	Rated Power	15W
Working Environment	Working Temperature	-20℃ - 65℃
	Working Humidity	10%RH-90%RH No solidification
Dimensions	Unit Dimensions：480.05mm x 250mm x 44mm	
Net Weight	2.81kg	

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.**