摩西尔
Mooncell

K2300S

Audio-Visual
Show Control
Media Player

KTV & Entertainment Venues

Product
Specification

SECTION 00

CONTENTS

Product specification, operation reference, and DMX512 channel mapping.

PRODUCT POSITIONING K2300S is specified as an Audio-Visual Show Control Media Player because it coordinates video, music, and lighting through DMX512, audio/beat detection, wall-panel control, and multi-output HDMI playback.

SECTION 01

PRODUCT OVERVIEW

Integrated media playback and show control for KTV rooms, private party rooms, karaoke lounges, and bars.

K2300S combines a high-performance multi-core processor, 4 GB DDR3 RAM, and 64 GB eMMC storage with hardware H.264/H.265 decoding. Two HDMI inputs, three synchronized HDMI outputs, DMX512 control, audio/beat detection, and wall-panel scene switching allow one device to coordinate video, music, and lighting as an integrated entertainment-venue show-control system.

1.8 GHz
MULTI-CORE
High-performance CPU/GPU

4 GB
DDR3 RAM
High-speed memory

64 GB
eMMC
Internal media storage

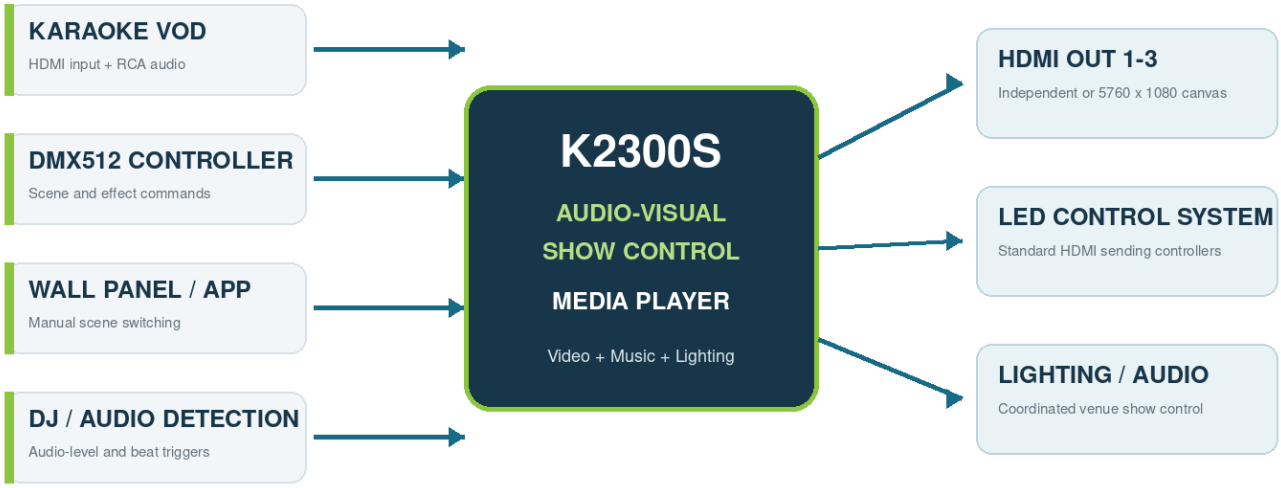
2 IN / 3 OUT
HDMI
Three synchronized outputs

SYSTEM ROLE K2300S serves as the central media and scene-orchestration device between the karaoke VOD system, venue control system, LED sending controllers, lighting control, and audio sources.

SECTION 02

SHOW CONTROL WORKFLOW

Multiple control sources trigger coordinated media scenes and synchronized HDMI output to LED display systems.



Typical entertainment-venue workflow. Final control routing depends on the installed KTV and LED display system.

SCENE CONTROL Switch scene presets through DMX512 commands, the front panel, a wall-mounted control panel, or a mobile app.

AUDIO-RESPONSIVE OPERATION Audio-level and beat detection can trigger HDMI window states, content changes, and synchronized visual effects.

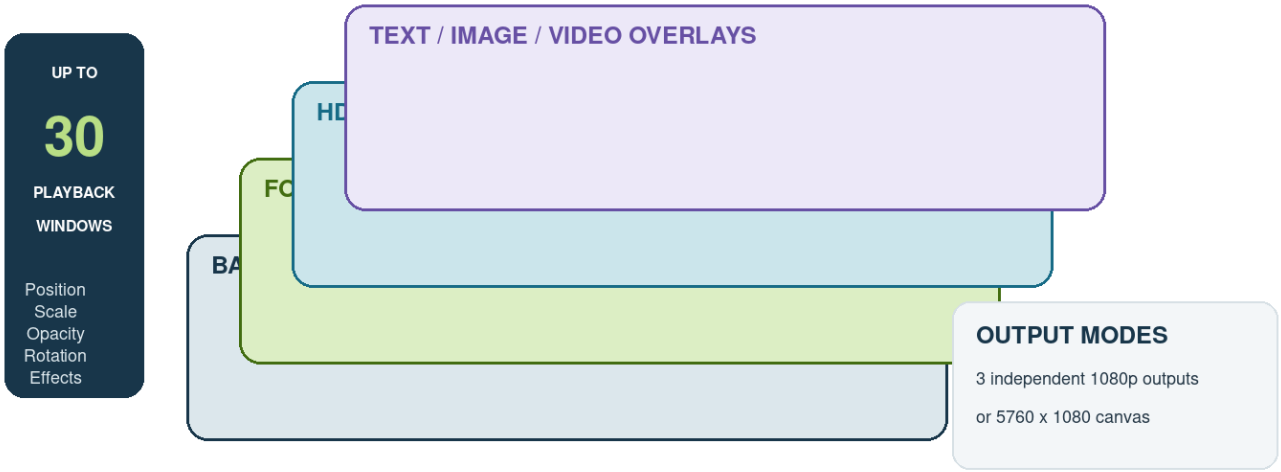
DISPLAY OUTPUT Three HDMI outputs can operate independently or form a combined 5760 x 1080 display canvas.

LED SYSTEM COMPATIBILITY Standard HDMI output supports LED sending controllers from multiple manufacturers.

SECTION 03

PLAYBACK & SHOW CONTROL FEATURES

Flexible multi-layer composition, window management, scene effects, and synchronized entertainment playback.



MULTI-LAYER COMPOSITION Composite HDMI input, foreground media, background media, text, images, and video layers with configurable opacity.

WINDOW MANAGEMENT Create arbitrary window layouts with configurable size, position, overlap, picture-in-picture, and picture-outside-picture; up to 30 playback windows are supported.

CONTENT & EFFECTS Supports seamless media switching, loop or command-triggered playback, RGB intensity adjustment, rotation, scaling, strobe, tiling, speed control, and other visual effects.

5D CONTENT SLICING Supports grouped content slices for multi-surface 5D display composition.

LOCAL OPERATION Built-in media can start automatically at power-up; media libraries can be updated by network or USB flash drive.

SECTION 04

MEDIA & DEVICE MANAGEMENT

Recommended media parameters and browser-based device administration.

RECOMMENDED MEDIA PARAMETERS

PARAMETER	REQUIREMENT
Container	MP4
Video codec	H.264 / H.265 hardware decoding
Frame rate	30 fps recommended
Resolution	1920 x 1080 recommended
Video bit rate	Up to 20,000 kbps (20 Mbps)
Image formats	JPG, JPEG, PNG

DEVICE MANAGEMENT

ITEM	DESCRIPTION
Network communication	Gigabit Ethernet LAN
Program / media update	Network or USB flash drive
Management terminal	PC or other browser-capable smart terminal
Management interface	Embedded web server; configure and manage the device through a standard web browser

WEB OPERATION The visual web interface supports window layout, media-library management, source selection, and other operating parameters without installing a dedicated desktop application.

SECTION 05

HARDWARE OVERVIEW

A 1U rack-mount media and show-control platform with extensive video, control, network, USB, and audio connectivity.

REAR PANEL

FRONT PANEL

Product images are for reference. Connector appearance may vary slightly by production batch.

CATEGORY	INTERFACE SUMMARY
Video	2 x HDMI inputs; 3 x HDMI outputs at 1920 x 1080p per output
Control	2 x DMX512 RJ45; 2 x RS-485 RJ45; 1 x TTL RJ45
Network / USB	1 x Gigabit Ethernet LAN; 2 x USB 3.0 rear; 1 x front USB access port
Audio	VOD RCA input, DJ RCA input, and one shared RCA output
Power	AC 100-240 V, 50/60 Hz; rated power 15 W

OUTPUT FLEXIBILITY Each HDMI output can display an independent composition. The three outputs can also be configured as a synchronized 5760 x 1080 combined canvas.

SECTION 06

REAR PANEL INTERFACES

Video, network, show-control, wall-panel, audio, USB, and AC power connections.

REF.	INTERFACE	FUNCTION
1	DMX512	2 x RJ45, T568B wiring; connection to the venue DMX512 / KTV show-control system.
2	RS-485	2 x RJ45, T568B wiring; wall-panel scene control.
3	LAN	Gigabit Ethernet network connection for Web management and media updates.
4	HDMI IN 1-2	Two HDMI inputs from karaoke VOD or other external video sources.
5	HDMI OUT 1-3	Three HDMI outputs; 1920 x 1080p per output.
6	USB 3.0 x2	Connect a USB flash drive, mouse, or supported USB peripheral.
7	RCA Audio I/O	VOD audio input + DJ audio input + one shared audio output for real-time audio detection and show-control linkage.
8	TTL	1 x RJ45, T568B wiring; wall-panel scene control.
9	AC Power	AC 100-240 V, 50/60 Hz input.

SECTION 07

FRONT PANEL CONTROLS

Local power, display, navigation keys, and front USB access.

REF.	CONTROL	FUNCTION
1	Power Switch	Turns the K2300S on or off.
2	Four-Digit Display	Shows menu codes, addresses, status values, and IP address segments.
3	Control Keys	ADD / UP, SUBTRACT / DOWN, MENU, CONFIRM, and EXIT.
4	Front USB	Front-access USB port for supported media and service operations.

KEY FUNCTIONS

KEY	OPERATION
ADD / UP	Increase a value or move upward through available values.
SUBTRACT / DOWN	Decrease a value or move downward through available values.
MENU	Select the next function menu.
CONFIRM	Save the selected function or value.
EXIT	Leave the current function selection.

SECTION 08

FRONT PANEL MENU A-D

DMX512 address, DMX filtering, DHCP/IP configuration, and log storage.

MENU	FUNCTION	SETTING
A	DMX512 Start Address	Use ADD / SUBTRACT to set the DMX512 starting address; press CONFIRM to save.
B	DMX Data Filter	Sets the DMX512 input filtering frame count. Default: 3.
C	DHCP / IP	The display cycles through the acquired IP address. First segment: 01 = static IP; 00 = dynamic IP. Submenu values: 0 = enable DHCP; 1 = disable DHCP; 2 = obtain IP address.
D	Log Storage	0 = save logs; 1 = do not save logs.

IP DISPLAY EXAMPLE A static address of 192.168.1.100 is displayed in four sequential blocks: 0001 / 0192 / 0168 / 0001 / 0100, depending on the active firmware display sequence.

SECTION 09

FRONT PANEL MENU F-K

HDMI input selection, beat-detection parameters, MCU status, and audio sensitivity.

MENU	FUNCTION	SETTING
F	HDMI Input Selection	F001 = HDMI IN 1; F002 = HDMI IN 2. With only one active input, the device selects it automatically. With two active inputs, select 1 or 2 and press CONFIRM.
G	Beat-Source Coefficient	Audio beat-source coefficient. Default: 6.
H	Beat Lower Threshold	Minimum beat-detection data value. Default: 40.
I	Beat Upper Threshold	Maximum beat-detection data value. Default: 140.
J	MCU Status	Displays a configuration-dependent MCU status code. Adjustment is not recommended.
K	dB Sensitivity	Audio sensitivity setting. For louder input signals, reduce the value or use a negative value. Default: 3.

SECTION 10

USB MEDIA IMPORT

Three mutually exclusive folder modes support overwrite, clear-and-copy, or additive media updates.

USB ROOT DIRECTORY Create exactly one of the following paths in the USB flash drive root: MBBox/ktv/XXX, MBBox/ktv_add/XXX, or MBBox/ktv_clear/XXX.

DIRECTORY RULES

1. Use only one control folder at a time: ktv, ktv_add, or ktv_clear. Do not place multiple modes on the same USB flash drive.
2. Replace XXX with a three-digit folder number from 001 to 255.
3. Copy the required media files into the corresponding XXX folder.

IMPORT MODES

FOLDER	MODE	BEHAVIOR
ktv	Overwrite copy	Files from the USB directory overwrite same-named files in the corresponding K2300S directory.
ktv_clear	Clear and copy	If an XXX directory exists on the USB drive, the corresponding K2300S directory is cleared before the USB media is copied.
ktv_add	Additive copy	If the K2300S directory already contains a file with the same name, the incoming file is renamed with a numeric prefix and copied without replacing the existing file.

EXAMPLE MBBox/ktv_add/023 imports media into device folder 023 using additive-copy behavior.

SECTION 11

DMX512 MAPPING GUIDE

Use the mapping profile that matches the installed firmware family.

PROFILE	FIRMWARE FAMILY	FOOTPRINT	DESCRIPTION
V2.0	9.2.1.xx	Channels 1-20	Legacy scene/effect mapping with dedicated all / foreground / background speed ranges.
V3.0	9.3.1.xx	Channels 1-20	Updated mapping with two HDMI input-source selections and expanded 3D rotation effects.

COMMISSIONING RULES

1. Set the DMX512 starting address in front-panel menu A.
2. Allow 20 consecutive DMX channels from the selected start address within the 1-512 universe.
3. Confirm whether the device is running the V2.0 or V3.0 mapping before programming the show controller.
4. DMX values are decimal values from 0 to 255 unless a narrower range is listed.
5. Foreground Folder (CH1) and Background Folder (CH3) must not both be set to 0.

IMPORTANT Do not mix V2.0 and V3.0 channel assignments in one show-control program. Values not defined in the selected profile should be treated as reserved or inactive.

SECTION 12A

DMX512 V2.0 CHANNEL MAP | CH 1-6

Foreground/background media selection and transparency control.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
1	Foreground Folder	0	Disabled. CH1 and CH3 must not both be 0.
1	Foreground Folder	1-255	Select foreground folder 001-255; each value maps to one folder.
2	Foreground Media	0	Randomly play media in the selected folder, regardless of the Web playback mode.
2	Foreground Media	1-255	Single mode: loop the specified media. Sequential mode: play the specified media, then continue sequentially. Random mode: play the specified media first, then continue randomly.
3	Background Folder	0	Disabled. CH1 and CH3 must not both be 0.
3	Background Folder	1-255	Select background folder 001-255; each value maps to one folder.
4	Background Media	0	Randomly play media in the selected folder, regardless of the Web playback mode.
4	Background Media	1-255	Single mode: loop the specified media. Sequential mode: play the specified media, then continue sequentially. Random mode: play the specified media first, then continue randomly.
5	Foreground Transparency	0	Disable / close the foreground layer.
5	Foreground Transparency	1-255	Values operate in increments of 10; higher values reduce transparency. 255 = least transparent.
6	Background Transparency	0	Disable / close the background layer.
6	Background Transparency	1-255	Values operate in increments of 10; higher values reduce transparency. 255 = least transparent.

SECTION 12B

DMX512 V2.0 CHANNEL MAP | CH 7-11

Strobe, RGB intensity, and playback-speed control.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
7	Strobe	0	Off
7	Strobe	1-32	All layers; speed increases proportionally from approximately 1 frame/s to 30 frames/s.
7	Strobe	33-64	Foreground layer; speed increases proportionally.
7	Strobe	65-96	Background layer; speed increases proportionally.
8	Red Intensity	0 / 1-254 / 255	Red off / adjust red-channel intensity during playback / full-screen solid red.
9	Green Intensity	0 / 1-254 / 255	Green off / adjust green-channel intensity during playback / full-screen solid green.
10	Blue Intensity	0 / 1-254 / 255	Blue off / adjust blue-channel intensity during playback / full-screen solid blue.
11	Playback Speed - All	0-60	0-10 normal; 11-20 2x; 21-30 1.5x; 31-40 0.8x; 41-50 0.5x; 51-60 pause.
11	Playback Speed - Foreground	61-120	61-70 normal; 71-80 2x; 81-90 1.5x; 91-100 0.8x; 101-110 0.5x; 111-120 pause.
11	Playback Speed - Background	121-180	121-130 normal; 131-140 2x; 141-150 1.5x; 151-160 0.8x; 161-170 0.5x; 171-180 pause.

SECTION 12C

DMX512 V2.0 CHANNEL MAP | CH 12

HDMI picture-in-picture window routing across the three HDMI outputs.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

DMX VALUE	HDMI WINDOW STATE
0	Close all HDMI input windows.
1-10	Open the HDMI input window on HDMI OUT 1.
11-20	Open the HDMI input window on HDMI OUT 2.
21-30	Open the HDMI input window on HDMI OUT 3.
31-40	Open the HDMI input window on HDMI OUT 1 and HDMI OUT 2.
41-50	Open the HDMI input window on HDMI OUT 1 and HDMI OUT 3.
51-60	Open the HDMI input window on HDMI OUT 2 and HDMI OUT 3.
61-255	Open the HDMI input window on HDMI OUT 1, HDMI OUT 2, and HDMI OUT 3.

WINDOW CONTROL Channel 12 opens or closes the external HDMI source window on selected output compositions. Window size and position are configured through the Web interface.

SECTION 12D

DMX512 V2.0 CHANNEL MAP | CH 13

Scaling control for all layers, the foreground layer, or the background layer.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

VALUE	SCOPE	SCALING BEHAVIOR
0	All	No scaling.
1-10	All	Proportional zoom in; maximum 3x.
11-20	All	Proportional zoom out; minimum 1 pixel.
21-30	All	Loop from 1 pixel to the original window size; higher value = faster.
31-40	All	Loop from original size to 3x; higher value = faster.
41-50	All	Loop from 1 pixel to 3x; higher value = faster.
51-60	Foreground	Proportional zoom in; maximum 3x.
61-70	Foreground	Proportional zoom out; minimum 1 pixel.
71-80	Foreground	Loop from 1 pixel to original size; higher value = faster.
81-90	Foreground	Loop from original size to 3x; higher value = faster.
91-100	Foreground	Loop from 1 pixel to 3x; higher value = faster.
101-110	Background	Proportional zoom in; maximum 3x.
111-120	Background	Proportional zoom out; minimum 1 pixel.
121-130	Background	Loop from 1 pixel to original size; higher value = faster.
131-140	Background	Loop from original size to 3x; higher value = faster.
141-150	Background	Loop from 1 pixel to 3x; higher value = faster.

SECTION 12E

DMX512 V2.0 CHANNEL MAP | CH 14-15

Rotation and tiling control for all, foreground, and background layers.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

CH 14 - ROTATION

VALUE	SCOPE	ROTATION BEHAVIOR
0	All	No rotation.
1-50	All	1-10 static 0-360° angle; 11-20 clockwise; 21-30 counterclockwise; 31-40 alternate one clockwise and one counterclockwise revolution; 41-50 off. Higher value within a motion range = faster.
51-100	Foreground	51-60 static angle; 61-70 clockwise; 71-80 counterclockwise; 81-90 alternating clockwise/counterclockwise; 91-100 off.
101-140	Background	101-110 static angle; 111-120 clockwise; 121-130 counterclockwise; 131-140 alternating clockwise/counterclockwise.
141-255	-	Inactive.

CH 15 - TILING

VALUE	SCOPE	TILING MATRIX
0	All	Off
1-16	All	1=1x2; 2=1x3; 3=1x4; 4=2x1; 5=2x2; 6=2x3; 7=2x4; 8=3x1; 9=3x2; 10=3x3; 11=3x4; 12=4x1; 13=4x2; 14=4x3; 15=4x4; 16=off.
17-32	Foreground	Same matrix sequence as values 1-16, offset by +16; 32=off.
33-48	Background	Same matrix sequence as values 1-16, offset by +32; 48=off.

SECTION 12F

DMX512 V2.0 CHANNEL MAP | CH 16-20

Audio-source switching, visual effects, screen-motion groups, slice groups, and track selection.

MAPPING PROFILE V2.0 mapping profile | Firmware family 9.2.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
16	Audio Source	0	Off
16	Audio Source	1-10 / 11-20	Switch to VOD audio / switch to DJ audio.
16	Audio Source	21-30 / 31-40	Internal MP3 single-play / internal MP3 loop playback.
16	Audio Source	41-255	Off
17	Visual Effects	0	Off
17	Visual Effects	1-20	1-10 diagonal shake from upper-left to lower-right; 11-20 random shake. Higher value = faster.
17	Visual Effects	21-100	21-30 slide left-to-right, bounce, then stop; 31-40 same and loop; 41-50 right-to-left then stop; 51-60 same and loop; 61-70 bottom-to-top then stop; 71-80 same and loop; 81-90 top-to-bottom then stop; 91-100 same and loop.
17	Visual Effects	101-140	101-110 center page-flip left-to-right, 360° then stop; 111-120 same and loop; 121-130 right-to-left then stop; 131-140 same and loop.
18	Screen Motion Group	0 / 1-100	Off / groups 1-10 in ten-value blocks; higher value within each block = faster.
19	Slice Group	0 / 1-50	Off / groups 1-5 in ten-value blocks.
20	Track Selection	0 / 16-255	Off
20	Track Selection	1-15	Select track 1-15. Filename format: musicMode_1_*.mp3; * may be replaced by text or characters.

SECTION 13A

DMX512 V3.0 CHANNEL MAP | CH 1-6

Foreground/background media selection and transparency control.

MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
1	Foreground Folder	0	Disabled. CH1 and CH3 must not both be 0.
1	Foreground Folder	1-255	Select foreground folder 001-255; each value maps to one folder.
2	Foreground Media	0	Randomly play media in the selected folder, regardless of the Web playback mode.
2	Foreground Media	1-255	Single mode: loop the specified media. Sequential mode: play the specified media, then continue sequentially. Random mode: play the specified media first, then continue randomly.
3	Background Folder	0	Disabled. CH1 and CH3 must not both be 0.
3	Background Folder	1-255	Select background folder 001-255; each value maps to one folder.
4	Background Media	0	Randomly play media in the selected folder, regardless of the Web playback mode.
4	Background Media	1-255	Single mode: loop the specified media. Sequential mode: play the specified media, then continue sequentially. Random mode: play the specified media first, then continue randomly.
5	Foreground Transparency	0 / 1-255	0 = blackout; values 1-255 operate in increments of 10. Higher values reduce transparency; 255 = least transparent.
6	Background Transparency	0 / 1-255	0 = blackout; values 1-255 operate in increments of 10. Higher values reduce transparency; 255 = least transparent.

SECTION 13B

DMX512 V3.0 CHANNEL MAP | CH 7-11

Color-flash strobe, RGB intensity, and playback-speed control.

MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
7	Strobe / Color Flash	0	Off
7	Strobe / Color Flash	1-10	Media-content strobe.
7	Strobe / Color Flash	11-20 / 21-30	Red flash / orange flash.
7	Strobe / Color Flash	31-40 / 41-50	Yellow flash / green flash.
7	Strobe / Color Flash	51-60 / 61-70	Blue flash / purple flash.
7	Strobe / Color Flash	71-80 / 81-255	White flash / off.
8	Red Intensity	0 / 1-254 / 255	Off / adjust red-channel intensity (1 minimum) / maximum red intensity.
9	Green Intensity	0 / 1-254 / 255	Off / adjust green-channel intensity (1 minimum) / maximum green intensity.
10	Blue Intensity	0 / 1-254 / 255	Off / adjust blue-channel intensity (1 minimum) / maximum blue intensity.
11	Playback Speed - All	0-60	0-10 normal; 11-20 2x; 21-30 1.5x; 31-40 0.8x; 41-50 0.5x; 51-60 pause.
11	Playback Speed - Foreground	0-60	0-10 normal; 11-20 2x; 21-30 1.5x; 31-40 0.8x; 41-50 0.5x; 51-60 pause.
11	Playback Speed - Background	0-60	0-10 normal; 11-20 2x; 21-30 1.5x; 31-40 0.8x; 41-50 0.5x; 51-60 pause.

SOURCE-MAPPING NOTE The V3.0 source table assigns the same 0-60 value range to All, Foreground, and Background playback-speed scopes. Confirm the intended target behavior against the installed firmware before show programming.

SECTION 13C

DMX512 V3.0 CHANNEL MAP | CH 12

HDMI input-source selection and PIP window routing across the three HDMI outputs.

MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

VALUE	INPUT SOURCE	HDMI WINDOW STATE
0	-	Close all HDMI input windows.
1-10	HDMI IN 1	Open on HDMI OUT 1.
11-20	HDMI IN 1	Open on HDMI OUT 2.
21-30	HDMI IN 1	Open on HDMI OUT 3.
31-40	HDMI IN 1	Open on HDMI OUT 1 + 2.
41-50	HDMI IN 1	Open on HDMI OUT 1 + 3.
51-60	HDMI IN 1	Open on HDMI OUT 2 + 3.
61-70	HDMI IN 1	Open on HDMI OUT 1 + 2 + 3.
71-80	HDMI IN 2	Open on HDMI OUT 1.
81-90	HDMI IN 2	Open on HDMI OUT 2.
91-100	HDMI IN 2	Open on HDMI OUT 3.
101-110	HDMI IN 2	Open on HDMI OUT 1 + 2.
111-120	HDMI IN 2	Open on HDMI OUT 1 + 3.
121-130	HDMI IN 2	Open on HDMI OUT 2 + 3.
131-140	HDMI IN 2	Open on HDMI OUT 1 + 2 + 3.
141-255	HDMI IN 1	Open on HDMI OUT 1 + 2 + 3, as defined in the source mapping.

SECTION 13D

DMX512 V3.0 CHANNEL MAP | CH 13

Scaling control for all layers, the foreground layer, or the background layer.

MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

VALUE	SCOPE	SCALING BEHAVIOR
0	All	No scaling.
1-10	All	Proportional zoom in; maximum 3x.
11-20	All	Proportional zoom out; minimum 1 pixel.
21-30	All	Loop from 1 pixel to the original window size; higher value = faster.
31-40	All	Loop from original size to 3x; higher value = faster.
41-50	All	Loop from 1 pixel to 3x; higher value = faster.
51-60	Foreground	Proportional zoom in; maximum 3x.
61-70	Foreground	Proportional zoom out; minimum 1 pixel.
71-80	Foreground	Loop from 1 pixel to original size; higher value = faster.
81-90	Foreground	Loop from original size to 3x; higher value = faster.
91-100	Foreground	Loop from 1 pixel to 3x; higher value = faster.
101-110	Background	Proportional zoom in; maximum 3x.
111-120	Background	Proportional zoom out; minimum 1 pixel.
121-130	Background	Loop from 1 pixel to original size; higher value = faster.
131-140	Background	Loop from original size to 3x; higher value = faster.
141-150	Background	Loop from 1 pixel to 3x; higher value = faster.

SECTION 13E

DMX512 V3.0 CHANNEL MAP | CH 14-15

Expanded rotation and tiling control for all, foreground, and background layers.

MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

CH 14 - ROTATION

VALUE	SCOPE	ROTATION BEHAVIOR
0	All	No rotation.
1-80	All	1-10 static 0-360° angle; 11-20 clockwise; 21-30 counterclockwise; 31-40 alternating clockwise/counterclockwise; 41-50 X-axis outside-to-inside; 51-60 X-axis inside-to-outside; 61-70 Y-axis outside-to-inside; 71-80 Y-axis inside-to-outside.
81-160	Foreground	81-90 static angle; 91-100 clockwise; 101-110 counterclockwise; 111-120 alternating; 121-130 X-axis outside-to-inside; 131-140 X-axis inside-to-outside; 141-150 Y-axis outside-to-inside; 151-160 Y-axis inside-to-outside.
161-240	Background	161-170 static angle; 171-180 clockwise; 181-190 counterclockwise; 191-200 alternating; 201-210 X-axis outside-to-inside; 211-220 X-axis inside-to-outside; 221-230 Y-axis outside-to-inside; 231-240 Y-axis inside-to-outside.

CH 15 - TILING

VALUE	SCOPE	TILING MATRIX
0	All	Off
1-16	All	1=1x2; 2=1x3; 3=1x4; 4=2x1; 5=2x2; 6=2x3; 7=2x4; 8=3x1; 9=3x2; 10=3x3; 11=3x4; 12=4x1; 13=4x2; 14=4x3; 15=4x4; 16=off.
17-32	Foreground	Same matrix sequence as values 1-16, offset by +16; 32=off.
33-48	Background	Same matrix sequence as values 1-16, offset by +32; 48=off.

SECTION 13F

DMX512 V3.0 CHANNEL MAP | CH 16-20

Audio-source switching, updated effects, screen-motion groups, slice groups, and channel 20 status.

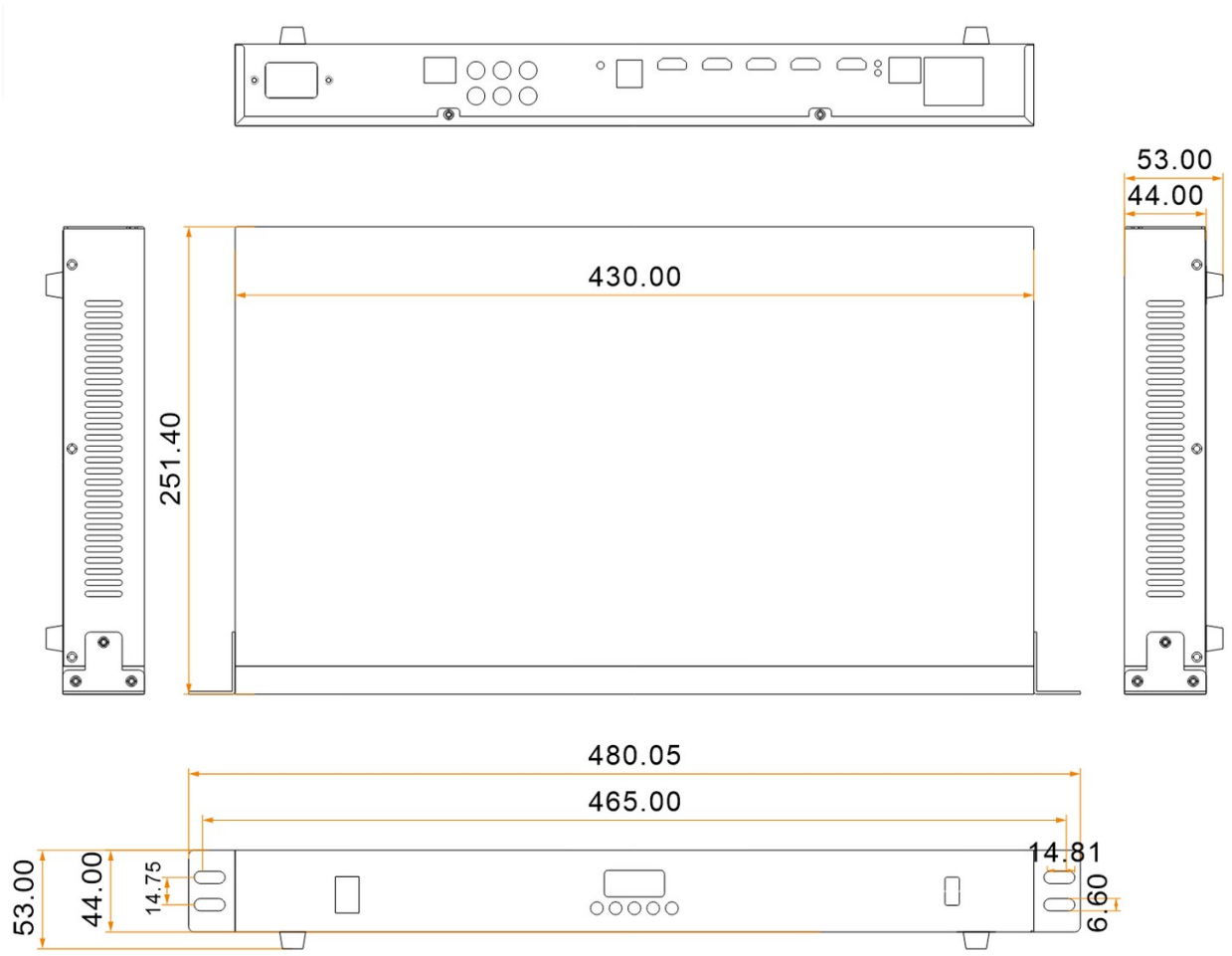
MAPPING PROFILE V3.0 mapping profile | Firmware family 9.3.1.xx

CH	FUNCTION	VALUE	BEHAVIOR
16	Audio Source	0	Off
16	Audio Source	1-10 / 11-20	Switch to VOD audio / switch to DJ audio.
16	Audio Source	21-30	Internal audio: use the active media soundtrack.
16	Audio Source	31-45	Internal MP3 single-play; 15 values correspond to 15 tracks.
16	Audio Source	46-60	Internal MP3 loop playback; 15 values correspond to 15 tracks.
17	Visual Effects	0	Off
17	Visual Effects	1-10 / 11-20	Foreground cube rotation right-to-left / left-to-right; higher value = faster.
17	Visual Effects	21-30 / 31-40	Foreground cube rotation top-to-bottom / bottom-to-top; higher value = faster.
17	Visual Effects	41-50	Foreground ghost-trail effect; higher value = faster.
18	Screen Motion Group	0 / 1-100	Off / groups 1-10 in ten-value blocks; higher value within each block = faster.
19	Slice Group	0 / 1-50	Off / groups 1-5 in ten-value blocks.
20	Disabled	-	Channel 20 is disabled in the V3.0 mapping.

SECTION 14

MECHANICAL DIMENSIONS

Rack-mount chassis dimensions and installation envelope.



Dimensions include the indicated rack ears and feet. Tolerance: +/-0.3 mm. Units: mm.

DIMENSION	VALUE
Overall width	480.05 mm including rack ears
Chassis width	430.00 mm
Mounting-hole span	465.00 mm
Depth	251.40 mm
Overall height	53.00 mm including feet / base
Chassis height	44.00 mm

SECTION 15

GENERAL SPECIFICATIONS & PACKAGING

Electrical, environmental, mechanical, accessory, and packaging data.

CATEGORY	PARAMETER	SPECIFICATION
Processing	CPU / GPU	High-performance multi-core processor, 1.8 GHz
Memory	RAM	4 GB DDR3
Storage	Internal storage	64 GB eMMC
Network	Access	Gigabit Ethernet
Video	Interfaces	2 x HDMI inputs; 3 x HDMI outputs
Video	LED system interface	Standard HDMI; supports third-party LED sending controllers
Electrical	Input voltage	AC 100-240 V, 50/60 Hz
Electrical	Rated power	15 W
Environment	Operating temperature	-20°C to +65°C
Environment	Operating humidity	10%-90% RH, non-condensing
Mechanical	Overall dimensions	480.05 x 251.4 x 53 mm, including rack ears and feet
Mechanical	Net weight	2.8 kg

ACCESSORIES & PACKAGING

ITEM	SPECIFICATION
Included accessories	1 x HDMI cable, 1 x power cable, 1 x Ethernet cable, 1 x quality certificate
Unit package size	515 x 222 x 120 mm
Gross weight per unit	3.91 kg including accessories and packaging
Packing quantity	3 units per carton

SECTION 16

SAFETY & DOCUMENT CONTROL

Qualified installation, AC power safety, ESD control, and environmental protection.

HIGH VOLTAGE The K2300S operates from AC 100-240 V, 50/60 Hz. Disconnect power before installation or service.

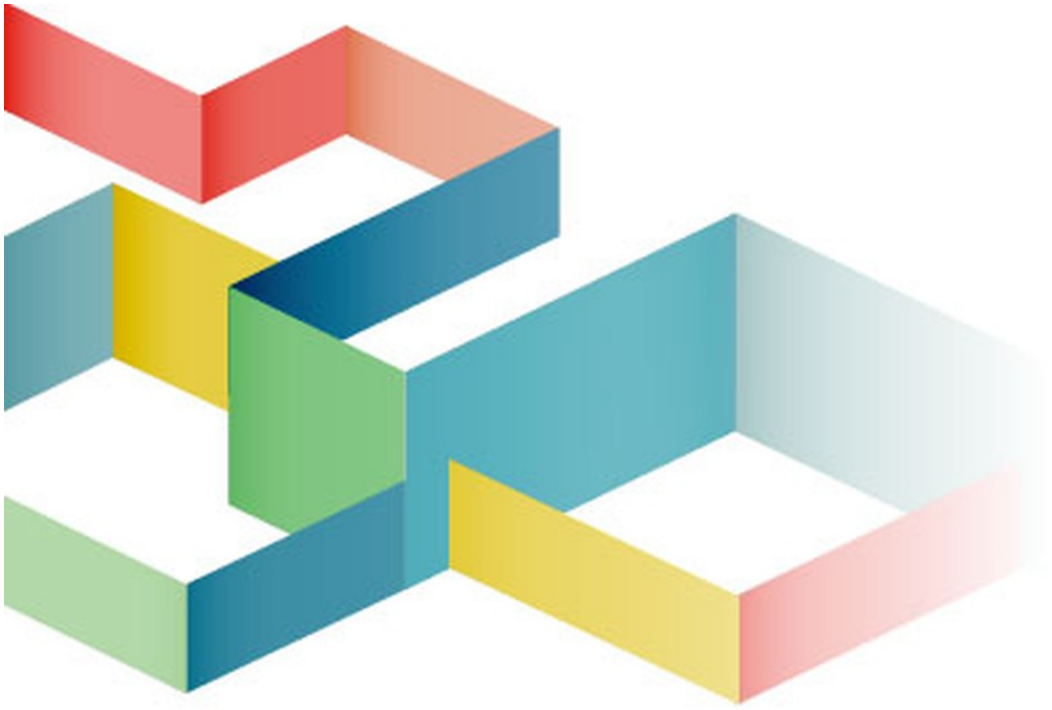
- Installation must be completed by qualified personnel.
- Use appropriate electrostatic-discharge precautions when handling or servicing the device.
- Protect the device from water, excessive dust, metal debris, and conductive contaminants.
- Operate the device in a clean, dry, and adequately ventilated environment.

DOCUMENT IDENTIFICATION

Model	K2300S	**Document**	Product Specification
Current revision	V4.1	**Release date**	2025-11-06
Product	Audio-Visual Show Control Media Player	**Language**	English

CHANGE HISTORY

VERSION	HARDWARE	RELEASE DATE	CHANGE DESCRIPTION
V4.0	K2300 (V2.0)	2025-08-19	Document updated; initial release under V4.0.
V4.1	K2300 (V2.0)	2025-11-06	Updated the DMX512 channel mapping.



After-Sales Service Hotline: 400-881-3531

Website: www.mooncell.com.cn

Address: Mooncell Building, Third Industrial Zone,
Baoshi South Road, Shiyan Subdistrict, Bao'an District,
Shenzhen, China