Intelligent Controller
K-Shock T8

Specifications

Version record

version number	Change details	Release time
V1.0	First release	2022.05.16

1. **Product description**

K-Shock T8 KTV intelligent controller (K-Shock T4 for short) adopts 4-core ARM architecture A55 processor, the highest frequency can reach 2.0GHz, integrated G52 GPU, built-in NPU, onboard 4G RAM, 64G EMMC internal storage, with powerful excellent video code capability, supports 4K H.264/H.265 and other high-definition decoding formats, supports one-way HDMI high-definition acquisition, integrates DMX512 decoding module, supports 16 DMX512 command channels, and integrates three-way audio source switching module to support audio source Switching and audio detection.

K-Shock T8 supports image cropping, copying, rotating and other functions, and supports special effects such as zooming, color changing, split screen, windmill, strobe, layer overlay, etc., through DMX512 or audio detection, combined with materials, music, and lighting, it is easy to realize the intelligent integration of sound and light in KTV and bar rooms.
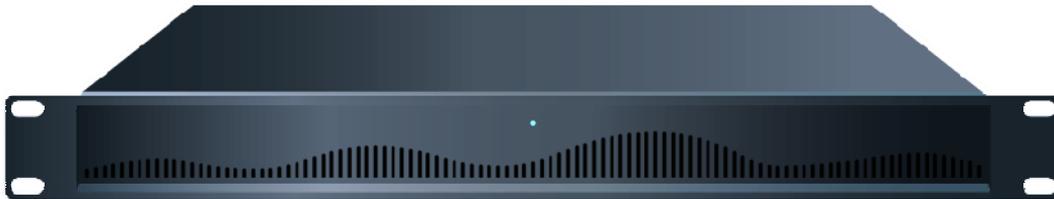
K-Shock Series KTV intelligent controller

2. **Features**

● Standard 1.5U metal case with hanging ears for easy fixing;

● Embedded hardware architecture, low power consumption, stable and reliable performance;

● Customized kernel system based on Android 11, supporting power-on and booting;

● 4G RAM running memory, onboard 64G EMMC internal storage;

● Onboard full gigabit network card, support gigabit wired network;

● Rich interfaces, onboard RS232\RS485\TTL\USB3.0 and other interfaces, support USB serial port expansion;

● Support one HDMI input, which can superimpose and display the MV song

screen on the material;

● Support two HDMI output with built-in EDID function;

● Support network linkage and serial port linkage, and can be connected with intelligent lighting controller, central control system, and song order system;

● Support mainstream song ordering systems, switch materials according to song emotions, support accurate song correspondence and user customization;

● Support three-way audio source switching, one local input, two external input (Karaoke player and disc player);

● Support H264/265 video hard decoding, support screen copy, crop, rotate, flip;

● Support material sequential rotation, random playback, single loop, timing switching and other methods;

● Support giant screen, background material, MV window, foreground animation integrated;

● Support murals, dynamically superimpose lyrics on the background material;

● Support picture-in-picture, display the MV screen on the background material, you can preset the number, size, position, border, and support special shapes;

● Support full-screen MV, which can display the MV window in full screen on the main screen, and display materials on the secondary screen;

● Support live DJ show, can superimpose and display live DJ show video on the background material;

● ；Support DMX512 control, default 16 channels, set the start address by software;

● Support zoom, split screen, windmill, colorful strobe, dark field, layer overlay and other special effects;

● Support RGB color adjustment, brightness adjustment, speed adjustment;

● Support audio detection, realize intelligent VJ effect through algorithm;

● Support WeChat applets, use the Internet of Things control protocol, and

the user's mobile phone does not need to connect to the local WIFI;

● Support the interactive functions of barrage and photo wall, and the photo wall supports a variety of dynamic effects;

● Support live broadcast function, can read live network stream in RTSP format, realize large-screen TV, ball games, LIVE show;

● Support greeting setting, there are two forms of fixed display and scrolling subtitles;

● Support advertising image rotation;

● Support foreground image overlay, can be implanted with customer LOGO; support U disk import, U disk playback and VIP mode;

● Support material preview, move, copy, delete, support recycle bin function;

● Support the coexistence of multiple modes to meet the needs of different time periods and different application scenarios;
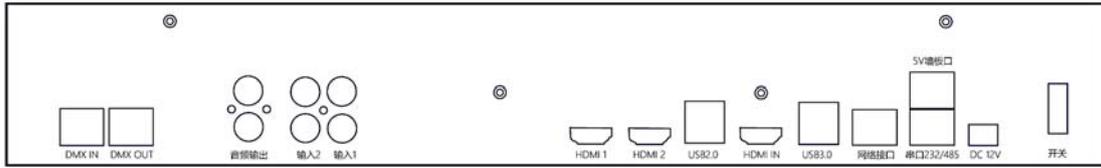
● Support panel control, optional standard panel, and compatible with third-party panels;

● Support personalized settings to meet user personalized requirements;

● Support cloud download and multi-machine synchronization to facilitate material update;

● Support mobile phone management and remote maintenance;

3.Port specification

K-Shock T8 Backplane Interface Diagram

Video port		
Type	Quantity	Specification
HDMI input	1	HDMI 1.4, maximum support 1920×1080@60Hz
HDMI output	2	HDMI 1.3, maximum support 1920×1080@60Hz

Audio port		
Type	Quantity	Specification
Audio input	2	RCA interface (lotus head)
Audio output	1	RCA interface (lotus head)

Control port		
Type	Quantity	Specification
RJ45	1	TTL, pin definition: 5V, RX, TX, GND, GND, NC, NC, NC
RJ45	1	RS232/485, pin definition: B-, A+, GND, NC, NC, GND, TX, RX
RJ45	1	DMX512 IN, pin definition: A+, B-, NC, GND
RJ45	1	DMX512 OUT, pin definition: A+, B-, NC, GND

Other interface		
Type	Quantity	Specification
USB	4	USB2.0*2，USB3.0*2
RJ45	1	1000M

Machine specification	
input power	DC 12V / 2.5A
Operating temperature	0-45℃
Dimensions	482×220×65mm （L×W×H）
running memory	4G
storage	64G
Overall power consumption	16W

4.Wiring Instructions

- **Switch**: On-off switch of the power supply;

- **DV 12V**: Power interface, connected to a standard power supply above 12V/2.5A;

- **5V wallboard port**: use 568B network cable to connect to standard wallboard; serial port 232/485: connect to peripheral or central control;

- **USB3.0\USB2.0**: Connect USB devices, such as U disk, wireless keyboard and mouse;

- **HDMI IN**: Connect video signals of VOD, notebooks, etc.;

- **HDMI OUT 1/2**: connected to large-screen display devices, such as LED video processors;

- **Audio input 1**: contact VOD audio;

- **Audio input 2**: CD player audio;

- **Audio output**: connected to the pre-stage effector;

- **DMX IN**: connected to the intelligent lighting control box;

- **DMX OUT**: connected to intelligent lighting such as moving head lights;

5.Topology diagram

Topology diagram

网线：**Network cable   HDMI 线：HDMI cable 音频线：Audio cable**

打碟机：**Disc Player 点歌机：VOD 交换机：switch**

LED 视频处理器：**LED Video Processor   K-Shock 2000：K-Shock T8**

控制面板：**Control panel 音响效果图:Sound effect picture 智能灯光控制器：**

Intelligent lighting controller

6.basic operation

This section briefly introduces the basic operations with the control panel.

The K-Shock T8 uses a simple 10-key wall plate (optional), available in both landscape and portrait styles.
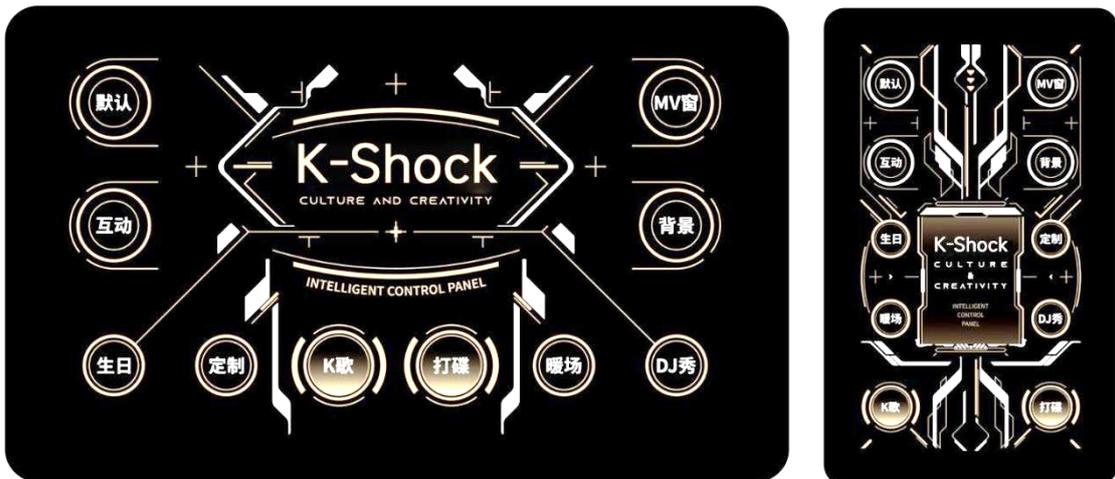

- **Default**: switch to the default mode when booting, and the background can be set;

- **Interaction**: Show or hide the interactive QR code;

- **MV window**: Control the MV window display, switch between picture-in-picture, full-screen MV, and mural status;

- Background: switch the background material in the current mode;

- **Birthday**: switch to the birthday scene. The current preset situation is that in this scene, pressing the MV window is invalid, the song linkage is invalid, and

the sound of K-Shock T4 is automatically switched;

- **Customization**: KTV can be adjusted freely according to operational needs, such as configuring it as a live broadcast, marriage proposal, or customizing its own exclusive mode;

- **Karaoke**: Switch to Karaoke mode. In karaoke mode, the audio is switched to the sound of input 1 karaoke machine, if the system linkage is configured, with the system linkage, DMX512 control will also take effect at the same time;

- **DJing**: switch to DJing mode, in DJing mode, the audio is switched to the sound of the input 2-disc player, the network linkage is invalid, and the material is controlled by DMX512;

- **Warm-up**: a reserved button, corresponding to the user's warm-up material;

- **DJ show**: press the DJ show button, it will switch to the dynamic mode, and the real DJ show video will be superimposed on the material. Continuously press the DJ show button, the DJ show video will be changed in turn;

7.Dimensions
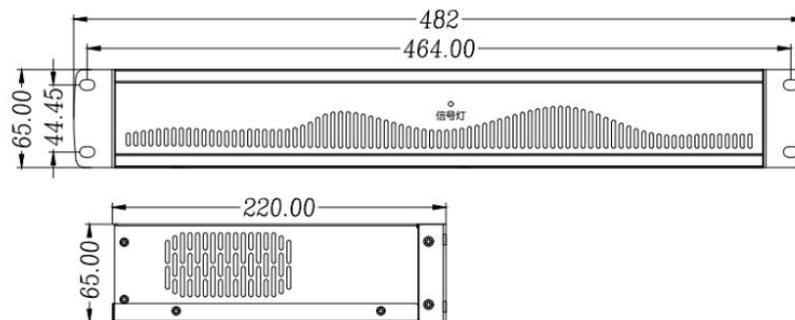
8.Precautions

- Please use a DC power supply with a voltage of 12V and a current greater than 2.5A;

- The wallboard port has a 5V output, please pay attention to connect the device correctly;

- Do not hot plug the HDMI high-definition cable;

- Pay attention to anti-static, waterproof, dust removal, and heat dissipation;