

8x8 4K 60Hz HDMI 2.0 Matrix Switch

Model: CH8820K

Ultra HD 4K@60Hz Transmission | 8x8 HDMI I/O | Audio Separation & External Input | Multi-Control (APP/Web/RS-232) | 1U Rack-Mount

一、Product Overview

CH8820K is a professional 8×8 HDMI 2.0 matrix switcher engineered to enable stable, high-quality signal distribution between 8 HDMI input sources (e.g., PCs, 4K players, Apple TV, DVD players) and 8 HDMI display devices (e.g., monitors, projectors, TVs). Compliant with HDMI 2.0 and HDCP 2.2 standards, it supports a 18Gbps video bandwidth, delivering lossless transmission of 4K@60Hz (3840×2160) signals with YUV4:4:4 color sampling. Equipped with versatile audio management (audio separation output & external audio input) and multi-control options (APP, Web UI, dual RS-232, dual TCP/IP), it is ideal for critical scenarios such as command centers, multi-screen conference rooms, high-end home theaters, and commercial exhibition halls—ensuring seamless, reliable audio-visual experiences.

二、Key Feature Highlights

1. 4K Ultra HD HDMI Transmission

Complies with HDMI 2.0 standard, supporting maximum resolution of 4K@60Hz (3840×2160) with YUV4:4:4 color sampling and 18Gbps video bandwidth.

- Supports advanced visual enhancements: HDR10, HLG, and Dolby Vision for vibrant, high-dynamic-range imagery.
- Backward compatible with lower resolutions (1080P@60/30Hz, 720P, 480P) to match mainstream display devices.

2. 8×8 HDMI I/O & Versatile Audio Management

8 HDMI input ports and 8 HDMI output ports (Type A, standard configuration) for simultaneous multi-source signal distribution.

- Audio separation: 8×3.5mm analog audio output ports to connect external speakers, separating audio from HDMI signals.
- External audio input: 8×3.5mm analog audio input ports, enabling audio embedding with silent HDMI video signals.

3. Intelligent Multi-Control Options

Supports diverse control methods for flexible operation in different scenarios:

- Mobile APP control: Compatible with Android and iOS systems, enabling remote management of multiple devices.

- Dual TCP/IP (RJ45): Enables Web UI control and network-based centralized management.
- Dual RS-232 (D-Sub 9-pin): For industrial-grade stable control of A/V equipment.
- Front-panel buttons & IR remote control: For local, direct operation (remote range not specified).

4. Advanced EDID & Signal Stability

Features independent EDID management for each output port, ensuring precise matching with different display devices and avoiding signal incompatibility.

- Supports 28AWG HDMI 2.0 cables (max. 5m single length); combined input-output length ≤10m (extenders or optical HDMI cables recommended for longer distances).

5. 1U Rack-Mountable Design

Compact 1U rack-mountable chassis (premium build) with LED status display on the front panel.

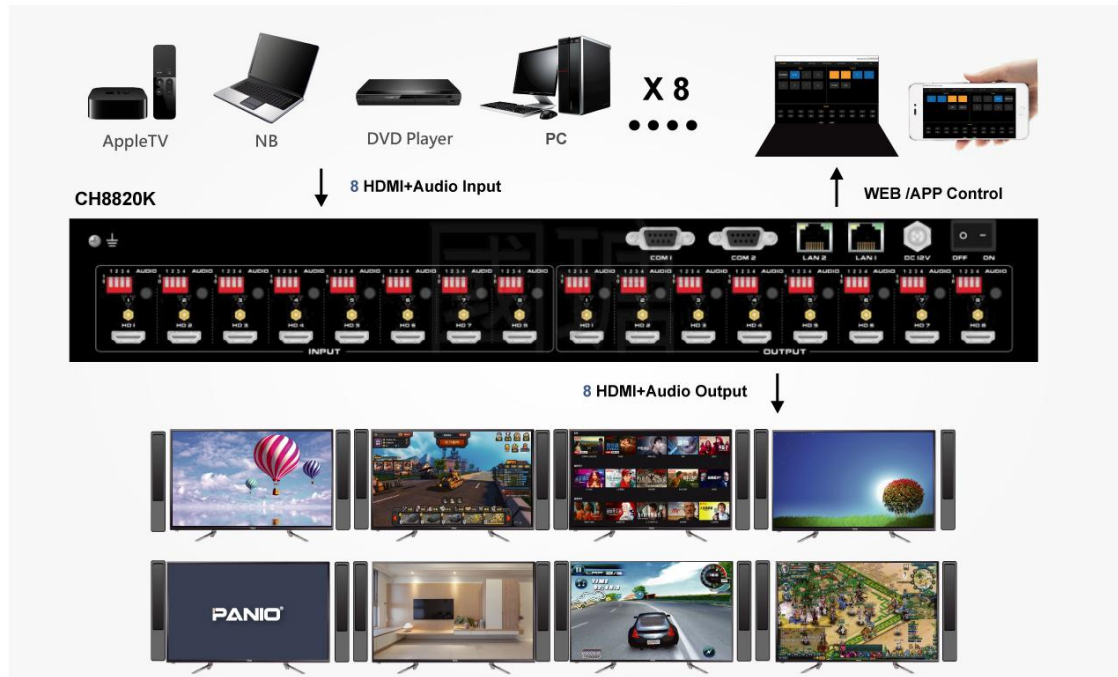
- Facilitates easy installation in standard server racks, saving space and simplifying system integration.
- LED indicators enable real-time monitoring of input/output signal status for quick troubleshooting.

三、 Detailed Specification Table

Model Name	CH8820K
Compliance	HDMI 2.0, HDCP 2.2, DVI 1.0
Video Bandwidth	18Gbps
Supported Resolutions	Max: 4K@60Hz (3840×2160) YUV4:4:4; Backward compatible with 1080P@60/30Hz, 720P, 480P
Color Depth	24-bit, 30-bit, 36-bit, 48-bit
Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X
HDMI I/O	8×HDMI Input (Type A); 8×HDMI Output (Type A)
Audio I/O	8×3.5mm Analog Audio Input; 8×3.5mm Analog Audio Output
Control Interfaces	1×Front Panel Buttons, 1×IR Remote Control, 2×RS-232 (D-Sub 9-pin),

	2×TCP/IP (RJ45, for Web UI & APP)
Max. Cable Length	Up to 5m (28AWG HDMI 2.0 cable); Combined input-output length ≤10m (extender/optical HDMI recommended for longer distances)

Diagram



Item	Specification Details
Power Supply	Output: DC 12V/3A (original certified adapter); Input: Compatible with global AC voltages (not specified)
Dimensions	440mm × 280mm × 82mm (L×W×H)
Weight	2.5kg
Chassis Material	Premium material (not specified, for 1U rack mounting)
Front Panel	LED status display (input/output signal monitoring)

四、 Important Notes for Use

- Cable Requirement:** Use only **certified HDMI 2.0 cables** to ensure stable 4K@60Hz signal transmission. Inferior or uncertified cables may cause signal distortion, freezes, or no output.
- Cable Length Limitation:** The combined length of input and output HDMI cables must not exceed 10m. For distances beyond 5m (28AWG cable), use a compatible HDMI extender or optical HDMI cable to prevent signal attenuation.
- Power Adapter Safety:** Use only the **original certified DC 12V/3A adapter** provided in the package. Unauthorized adapters may damage the device or cause safety hazards.
- Remote Control:** The IR remote control does not include batteries due to shipping safety regulations. Please purchase compatible batteries separately.
- Third-Party Compatibility:** If integrating the device with third-party switchers, distributors, or converters, inform the supplier in advance to avoid compatibility issues. Do not use uncertified third-party devices.
- Rack Installation:** When installing in a rack, ensure proper ventilation around the device to maintain heat dissipation. Avoid blocking the front-panel LED indicators for easy status monitoring.

五、 Package Contents

Item	Quantity	Remarks
CH8820K Matrix Unit	1 unit	
DC Power Adapter (12V/3A)	1 unit	
IR Remote Control	1 unit	battery not included
User Manual	1 piece	

Core Advantages Summary

- ✓ 8×8 HDMI I/O + dual audio functions (separation/input) for flexible A/V system building
- ✓ Multi-control options (APP/Web UI/2×RS-232/2×TCP/IP) for remote & centralized management
- ✓ 1U rack-mountable design with LED status display for space-saving and easy maintenance

✓ Strict HDMI 2.0/HDCP 2.2 compliance and extended cable support for reliable signal transmission