

4K 30Hz 8x1 Professional HDMI Video Switcher

Model: CH8120K

Ultra HD 4K@30Hz Transmission | 8x1 HDMI I/O | Seamless Switching | Scaler Function | Auto Scan & Signal Detection | Audio-Video Separation

一、Product Overview

CH8120K is a professional-grade 8×1 HDMI video switcher engineered to efficiently manage signal switching between 8 HDMI input sources (e.g., PCs, 4K players, set-top boxes) and 1 HDMI display device (e.g., monitors, projectors, TVs). It supports a maximum resolution of 4K@30Hz (3840×2160) and is backward compatible with mainstream lower resolutions (1080P@60Hz, 720P@60Hz, 1366×768@60Hz), ensuring compatibility with most display systems.

Equipped with core functions such as **seamless switching** (zero blackout/interruption), **scaler (up/down frequency)**, and **auto scan/detection**, it eliminates viewing disruptions and reduces manual operation. The built-in audio-video separation feature (3.5mm audio output) allows flexible connection to external speakers, making it ideal for scenarios like small conference rooms, home theaters, retail display areas, and educational classrooms—delivering stable, high-quality audio-visual experiences.

二、Key Feature Highlights

1. 8×1 HDMI I/O & Flexible Signal Management

- 8 HDMI input ports (Type A, standard) for connecting multiple signal sources simultaneously; 1 HDMI output port for linking to a single display.
- Supports **Audio Return Channel (ARC)** to transmit audio from the display back to the switcher, simplifying audio system wiring.

1. 4K@30Hz Resolution & Scaler Function

- Maximum input/output resolution: 4K@30Hz (3840×2160); backward compatible with 1080P@60Hz, 720P@60Hz, and 1366×768@60Hz.
- Built-in scaler function: Output resolution can be fixed to 1366×768, 720P, 1080P, or 4K@30Hz via buttons/remote control, optimizing video quality for different displays.

1. Seamless Switching & Intelligent Signal Handling

- **0-second seamless switching:** No black screen, flicker, or freeze during source transitions, ensuring smooth presentations and viewing.
- **Auto signal detection:** Automatically prioritizes and displays active backward signals; intelligently skips input ports with no signal to reduce black screen waiting time.

- **Auto scan function:** After activation, cycles through all input sources every 3 seconds (toggle on/off as needed) for real-time monitoring of multiple signals.

1. Audio-Video Separation & Diverse Control Methods

- Independent 3.5mm analog audio output: Enables connection to external speakers/amplifiers, separating audio and video for flexible sound system configuration.
- Multi-control options: Supports remote control (10m+ range with external IR receiver), RS-232 command control (industrial-grade stability), and front-panel buttons for convenient operation.

1. Energy Efficiency & Compact Design

- Backup energy-saving mode: Reduces power consumption when not in heavy use.
- Lightweight, compact chassis (320×107×27mm): Easy to install in small spaces or mount on desktops, no complex rack setup required.

三、 Detailed Specification Table

Model Name	CH8120K
HDMI I/O	8×HDMI Input (Type A, standard); 1×HDMI Output (Type A, standard)
Supported Resolution	Input: 3840×2160@30Hz, 1920×1080@60Hz, 1280×720@60Hz, 1366×768@60Hz (each input port configurable via RS-232)Output: 3840×2160@30Hz, 1920×1080@60Hz, 1280×720@60Hz, 1366×768@60Hz (configurable via buttons/remote)
Key Functions	Seamless switching, Scaler (up/down frequency), Auto scan (3-second interval), Auto signal detection, Audio-Video separation, ARC
Audio Output	1×3.5mm Analog Audio (for external speakers/amplifiers)
Control Interfaces	1×RS-232 (D-Sub 9-pin, for industrial control); IR remote control (with external 3.5mm IR receiver); Front-panel buttons
IR Range/Frequency	≥10m (line of sight); Standard consumer IR frequency
Chassis Material/Color	Plastic + Metal (durability & basic heat dissipation) / Black

Dimensions	320mm × 107mm × 27mm (L×W×H)
Weight	900g
Power Supply	Input: Not specified (powered via included adapter)Output: DC 12V / 1A (original certified adapter)
Cable Length Limit	Total length of input + output HDMI cables ≤ 10 meters (optical HDMI cable recommended for distances >10m)
Operating Temperature	Not specified (suitable for indoor use: 0–40°C recommended)

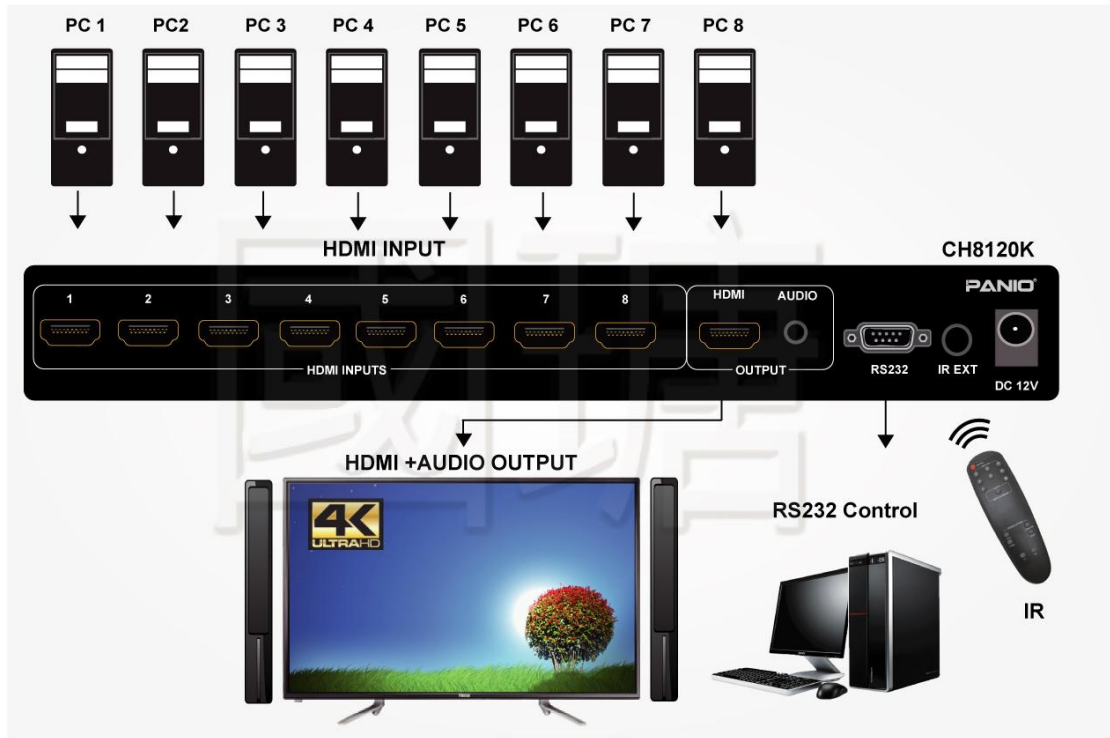
四、 Important Notes for Use

- 1. Device Compatibility:** Do not cascade (serial connect) with uncertified switchers, distributors, or converters—this may cause signal loss or device damage.
- 2. Power Supply:** Use only the original DC 12V/1A adapter included in the package to ensure stable performance and avoid hardware failure.
- 3. Cross-Device Use:** If using the switcher with third-party devices (e.g., amplifiers, extenders), inform the supplier in advance to check compatibility and prevent malfunctions.
- 4. Cable Length & Type:** Ensure the total length of input and output HDMI cables does not exceed 10 meters. For longer distances, use an **optical HDMI cable** to avoid signal attenuation.
- 5. Auto Scan Setup:** The auto scan function (3-second interval) must be manually activated via the remote control or front panel; it does not start automatically on power-up.

五、 Package Contents

Item	Quantity	Remarks
CH8120K Switcher Unit	1 unit	
Power Adapter	1 unit	DC 12V/1A
IR Remote Control	1 unit	Batteries not provided

Diagram



Core Advantages Summary

- ✓ 8×1 HDMI I/O to handle multiple signal sources with a single display
- ✓ 4K@30Hz resolution + Scaler function for optimized video quality on any screen
- ✓ Seamless 0-second switching—no blackouts during presentations or viewing
- ✓ Auto scan/detection to skip empty ports and reduce waiting time
- ✓ Audio-video separation (3.5mm output) for flexible sound system integration
- ✓ Multi-control options (IR/RS-232/buttons) for diverse usage scenarios
- ✓ Compact, lightweight design for easy installation in small space