

4K 60Hz 18Gbps 1×8 HDMI Splitter

Model: PANIO CH218K_W

1. Product Overview

The CH218K_W is a high-performance 1×8 HDMI splitter designed for ultra-high-definition signal distribution. It enables simultaneous splitting of one HDMI signal source to 8 HDMI display devices, boasting 18Gbps video bandwidth and supporting a maximum resolution of 4K@60Hz 4:4:4. Compliant with HDMI 2.0b and HDCP 2.2 standards, it is equipped with EDID control management (supporting COPY and AUTO modes) and compatible with a wide range of high-quality audio formats. Its compact and rational structural design ensures easy installation, making it ideal for multimedia meeting rooms, TV teaching scenarios, large-screen display projects, and other environments that demand stable, clear audio-visual transmission.

2. Key Features

- **4K Ultra HD Transmission:** Supports a maximum resolution of 4K@60Hz 4:4:4 with 18Gbps video bandwidth, accurately restoring true colors and fine image details. It is also compatible with resolutions ranging from 480i to 1080p50/60Hz and 4Kx2K@24/30Hz, meeting diverse display requirements.
- **Comprehensive Standard Compliance:** Adheres to HDMI 2.0b and HDCP 2.2 specifications, ensuring seamless compatibility with most modern audio-visual devices (such as UHD TVs, Blu-ray players, and set-top boxes) and secure signal transmission to prevent unauthorized access.
- **Flexible EDID Management:** Features EDID control management with two operating modes—COPY and AUTO. In COPY mode, the device copies the EDID settings of display devices in the order of OUT1 to OUT8; in AUTO mode, it automatically identifies and matches the optimal EDID signal for the source device, ensuring consistent signal adaptation across all connected displays.
- **Rich Audio Support:** Compatible with multiple high-quality audio formats, including PCM 2CH, LPCM 7.1/5.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, and DTS:X. This delivers an immersive audio experience suitable for home theaters, meeting rooms, and other scenarios.
- **Stable & Durable Design:** Adopts a high-quality metal shell that is sturdy and wear-resistant, while also facilitating efficient heat dissipation to maintain stable device operation. Equipped with ESD protection (±8kV air discharge, ±4kV contact discharge), it effectively resists electrostatic interference and extends the product's service life.
- **Easy Installation:** With a compact size and user-friendly structural design, the device can be easily placed on desktops, mounted in racks (with optional accessories), or integrated into existing audio-visual systems, adapting to various installation environments.

3. Technical Specifications

Model Name	4K60 1×8 HDMI Splitter (CH218K_W)
Compliant Standards	HDMI 2.0b, HDCP 2.2
Video Specifications	Resolution: 480i ~ 1080p50/60Hz, 4Kx2K@24/30Hz, 4K2K@60Hz 4:4:4Bandwidth: 18GbpsColor Depth: Compatible with standard color depths (supports 8-bit/10-bit/12-bit for seamless color transition)Color Space: RGB, YCbCr 4:4:4, YCbCr 4:2:2HDR Support: Yes (enhances contrast and color range for vivid images)
Audio Specifications	Supported Formats: PCM 2CH, LPCM 7.1/5.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Port Configuration	Input: 1×HDMI Type A (19-pin female, for connecting signal sources like Blu-ray players)Output: 8×HDMI Type A (19-pin female, for connecting display devices like UHD TVs/monitors)Other Ports: 1×SERVICE (Micro USB, dedicated for firmware upgrade to support function updates), 1×DC 12V Power Input Port (for connecting the provided adapter)
Transmission Distance	4K/60Hz YUV 4:4:4: Up to 5m (when using high-quality certified HDMI cables)4K2K@30Hz/8-bit: Up to 10m (when using high-quality certified HDMI cables)1080p@60Hz/8-bit: Up to 15m (when using high-quality certified HDMI cables)
Power Requirements	Input: AC 100~240V 50/60Hz (compatible with global voltage standards)Output: DC 12V/1A (US/EU plug options, CE/FCC/UL certified for safety)Power Consumption: 6.36W (low power consumption for energy efficiency)
Operating Environment	Temperature: -10°C ~ 50°C (14°F ~ 122°F)Humidity: 20% ~ 90% RH (no condensation, to prevent internal component damage)
Storage Environment	Temperature: -20°C ~ 60°C (-4°F ~ 140°F)Humidity: 20% ~ 90% RH (no condensation, suitable for long-term storage)
Physical Dimensions	243mm (Length) × 102mm (Width) × 16mm (Height) (compact size for space-saving installation)Weight: 589g (lightweight for easy handling and mounting)Housing: Metal (Black, anti-scratch and corrosion-resistant)

Protection Design	ESD Protection: $\pm 8\text{kV}$ (air discharge), $\pm 4\text{kV}$ (contact discharge) (effectively protects internal circuits from electrostatic damage)
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4. Important Installation Notes

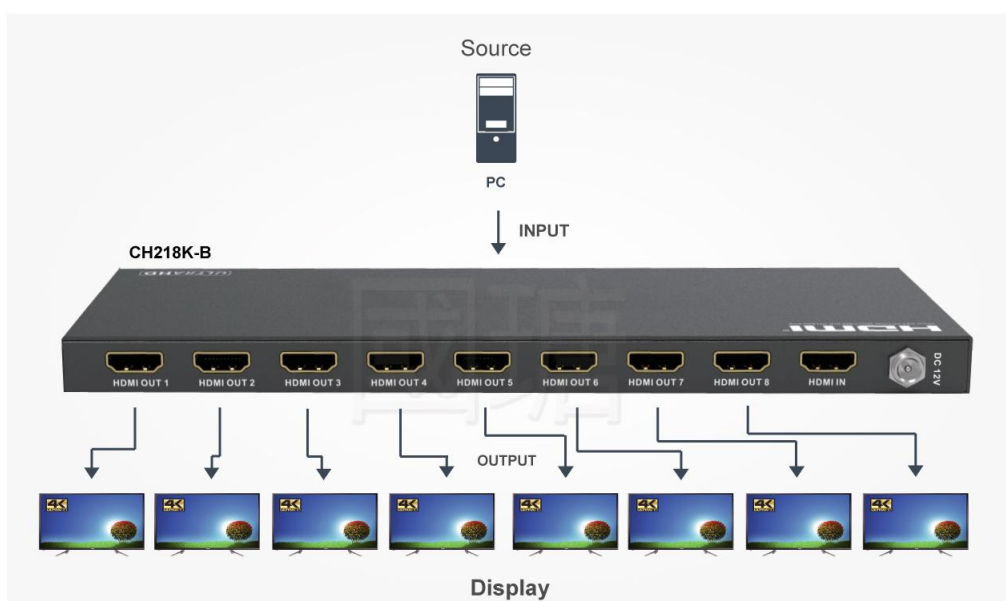
1. The CH218K_W contains precision electronic components. Do not use it in environments with dust, oil fume, conductive dust, corrosive gas, flammable gas, high temperature, condensation, wind/rain exposure, vibration, or impact—these conditions may cause product damage, electric shock, or fire.
2. To ensure optimal transmission quality and avoid signal attenuation/distortion, use high-quality, certified high-speed HDMI cables. Strictly follow the specified cable length limits (see Section 3: Transmission Distance) for different resolutions.
3. Before installation and wiring, cut off all external power supplies to prevent electric shock or equipment damage. The product is grounded via the power cord's ground wire—ensure the ground wire is properly connected to the earth before powering on the device.
4. When drilling screw holes (for rack mounting) or wiring, avoid letting metal shavings, wire ends, or other debris fall into the device's ventilation holes. Such debris may cause short circuits, fire, equipment failure, or misoperation.
5. After installation, confirm that no foreign objects (including packaging materials like dust-proof paper) block the device's ventilation surface. Blocked ventilation will lead to poor heat dissipation, which may cause overheating, performance degradation, or equipment failure.
6. Do not wire, plug, or unplug cable connectors when the device is powered on. Hot-swapping may cause electric shock, circuit damage, or sudden signal interruption. Ensure all connections (HDMI, power, etc.) are firm and reliable to prevent misoperation due to poor contact.
7. In environments with severe electromagnetic interference (e.g., near high-power equipment or industrial machinery), use shielded HDMI cables for high-frequency signal input/output. This enhances the system's anti-interference performance and ensures stable signal transmission.
8. Only use the original DC 12V/1A power adapter provided with the CH218K_W. Using non-compliant adapters may cause power supply instability, equipment damage, or safety hazards (such as overheating or fire).

5. Package Contents

Item	Quantity
4K60 1×8 HDMI Splitter (CH218K_W)	1 unit
DC 12V/1A Power Adapter (with lock)	1 piece

6. Connection Use Case

Diagram



7. Function Description

Label	Name	Function Description
1	Power LED	Blue LED illuminates steadily when the device is connected to a valid power supply (indicates normal power input).
2	IN LED	Blue LED lights up when the HDMI IN port is connected to an active signal source (indicates successful signal detection from the source).
3	OUT (1~8) LED	Corresponding blue LED lights up for each HDMI OUT port that is properly connected to a display device (indicates successful signal output to the display).
4	SERVICE Port	Micro USB interface, exclusively used for firmware upgrades. Connect to a computer via a Micro USB cable to update the

		device's firmware (improves compatibility or adds new functions).
5	EDID Switch (COPY/AUTO)	Two-position toggle switch to select EDID mode: - COPY: Copies EDID settings from OUT1 to OUT8 in sequence (prioritizes OUT1, then OUT2 if OUT1 is unavailable, and so on). - AUTO: Automatically compares EDID settings of all OUT1~8 display devices and sends the optimal EDID signal to the source.
6	HDMI OUT 1~8	8 HDMI Type A female ports, used to connect HDMI display devices (e.g., TVs, monitors) to receive split signals.
7	HDMI IN	Single HDMI Type A female port, used to connect HDMI signal source devices (e.g., Blu-ray players, set-top boxes) to input the original signal.
8	DC 12V Port	Power input interface, connects to the provided DC 12V/1A power adapter to supply power to the device (must use the original adapter for safety).

8. Frequently Asked Questions

① Q: What are the typical application scenarios for the CH218K_W?

A: It is widely applicable to entertainment rooms (home theaters), lecture halls, large auditoriums, product demonstration rooms, public commercial display areas (e.g., shopping mall digital signs), and multimedia meeting rooms—any scenario that requires distributing one HDMI signal to multiple display devices simultaneously.

② Q: Which input source and output devices are compatible with the CH218K_W?

A: Input source devices: Blu-ray/DVD players, PS3/PS4/PS5 game consoles, set-top boxes, computers (with HDMI output), or any input device that complies with HDCP 2.2 specifications and supports 6G performance.

Output devices: 6G HDMI-compatible TVs, monitors, projectors, audio amplifiers (with HDMI input), etc.

Note: To achieve 6G performance (supporting 4K@60Hz 4:4:4), use certified high-speed HDMI cables (e.g., HDMI 2.0 or higher) to ensure signal integrity.

③ Q: Are there any restrictions on the length of HDMI cables used with the CH218K_W?

A: According to official cable length tests, the maximum supported lengths for different resolutions are as follows:

- 4K/60Hz YUV 4:4:4: Up to 5m (use certified high-speed HDMI cables).
- 4K2K@30Hz/8-bit: Up to 10m (use certified high-speed HDMI cables).
- 1080p@60Hz/8-bit: Up to 15m (use standard high-speed HDMI cables).

We recommend using brand-certified HDMI cables to avoid signal loss or instability caused by low-quality cables.

9. Safety Instructions

- **Warning Symbols:** The symbols in this manual and on the CH218K_W device indicate potential risks of personal injury (e.g., electric shock) or property damage. Read and understand these symbols before operating the device.
- **Electric Shock Prevention:** Do not open the device's housing. The internal circuits contain uninsulated dangerous voltages that may cause severe electric shock. If maintenance or repair is required, contact qualified professional service personnel—do not attempt to disassemble the device yourself.
- **Operation Safety:** Do not touch the device's ports or terminals when it is powered on, as this may cause electric shock or signal interference. Before cleaning the device, tightening terminals, or connecting/disconnecting cables (including HDMI and power cables), turn off the power and unplug the adapter.