

# 4K 60Hz 18Gbps 1×4 HDMI Splitter

Model: PANIO CH214K\_W

## 1. Product Overview

The **CH214K\_W** is a high-performance 1×4 HDMI splitter designed for ultra-high-definition signal distribution. It enables the simultaneous splitting of one HDMI signal source to 4 HDMI display devices, boasting an 18Gbps video bandwidth and supporting resolutions up to 4K@60Hz 4:4:4. Compliant with HDMI 2.0b and HDCP 2.2 standards, it features intelligent EDID control management (STD and TV modes) to ensure maximum compatibility.

Housed in a compact, durable metal chassis, the CH214K\_W allows for flexible installation in diverse environments. It is the ideal solution for multimedia conference rooms, digital signage in shopping malls, TV teaching scenarios, and home theater systems requiring stable, lossless audio-visual transmission.

## 2. Key Features

- **4K Ultra HD Transmission:** Supports a maximum resolution of 4K@60Hz (YUV 4:4:4) with 18Gbps bandwidth, accurately restoring true colors and fine details. It is fully compatible with VESA mode video formats up to QSXGA@60Hz and supports 3D frame sequential video.
- **Comprehensive Standard Compliance:** Adheres to HDMI 2.0b and HDCP 2.2 specifications, ensuring seamless compatibility with modern sources (Blu-ray players, Set-top boxes, Consoles) and 4K displays.
- **Intelligent EDID Management:** Features a dedicated switch for EDID control.
  - **STD Mode:** Uses built-in settings (1080p@60Hz, LPCM 2CH) to ensure video output when compatibility issues arise.
  - **TV Mode:** Reads the EDID of the display connected to Output 1. If a 4K capability is detected, it transmits the 4K signal to all outputs; otherwise, it outputs the best common resolution.

- **Rich Audio Support:** Compatible with high-quality audio formats including LPCM 7.1CH, Dolby TrueHD, and DTS-HD Master Audio, delivering an immersive audio experience.
- **Compact & Durable Design:** The unit features a high-quality metal shell (63mm x 163mm x 16mm) that aids in heat dissipation and protects internal components.
- **ESD Protection:** Equipped with industrial-grade ESD protection ( $\pm 8\text{kV}$  air discharge,  $\pm 4\text{kV}$  contact discharge) to prevent damage from electrostatic interference.

### 3. Technical Specifications

Category	Specification
Model Name	4K60 1×4 HDMI Splitter (CH214K_W)
Compliant Standards	HDMI 2.0b, HDCP 2.2
Video Specifications	<b>Resolution:</b> 480i~1080p50/60Hz, 4Kx2K@24/30Hz, 4K2K@60Hz <b>Bandwidth:</b> 18Gbps / 600MHz <b>Color Space:</b> RGB, YCbCr 4:4:4, YCbCr 4:2:2 <b>Color Depth:</b> 8-bit
Audio Specifications	LPCM 7.1CH, Dolby TrueHD, and DTS-HD Master Audio
Port Configuration	<b>Input:</b> 1× HDMI Type A (19-pin female) <b>Output:</b> 4× HDMI Type A (19-pin female) <b>Other:</b> 1× SERVICE (Micro USB for firmware), 1× DC 5V Power Input
Power Requirements	<b>Input:</b> AC 100~240V 50/60Hz <b>Output:</b> DC 5V/1A (CE/FCC/UL certified) <b>Power Consumption:</b> 2W (Max)
Operating Environment	<b>Temperature:</b> 0°C ~ 40°C (32°F ~ 104°F) <b>Humidity:</b> 20% ~ 90% RH (non-condensing)

<b>Storage Environment</b>	<b>Temperature:</b> -20°C ~ 60°C (-4°F ~ 140°F) <b>Humidity:</b> 20% ~ 90% RH (non-condensing)
<b>Physical Properties</b>	<b>Dimensions:</b> 63mm (W) × 163mm (D) × 16mm (H) <b>Weight:</b> 260g <b>Housing:</b> Metal (Black)

## 4. Important Installation Notes

1. **Environment:** Do not use the CH214K\_W in environments with excessive dust, oil smoke, conductive debris, corrosive gas, or high humidity. Ensure the device is placed on a stable surface.
2. **Cabling:** To ensure optimal 4K@60Hz transmission, use high-quality, certified Premium High Speed HDMI cables.
3. **Ventilation:** Do not block the ventilation areas of the device housing. Overheating may cause performance degradation.
4. **Power:** Only use the original DC 5V/1A power adapter provided. Using non-compliant adapters may cause instability or equipment damage.
5. **Hot-Swapping:** Avoid plugging or unplugging HDMI cables while the device is powered on to prevent potential circuit damage or signal negotiation errors.

## 5. Package Contents

Item	Quantity
4K60 1×4 HDMI Splitter (CH214K_W)	1 unit
DC 5V/1A Power Adapter	1 piece
User Manual	1 piece

## 6. Function Description

Label	Name	Function Description
1	<b>POWER LED</b>	Blue LED illuminates when the device is connected to a valid power supply.
2	<b>IN LED</b>	Blue LED illuminates when an active HDMI Source is connected.
3	<b>OUT LED (1~4)</b>	Corresponding blue LED lights up for each HDMI OUT port connected to an active display.
4	<b>SERVICE</b>	Micro USB interface, exclusively used for firmware upgrades.
5	<b>EDID Switch</b>	<b>STD:</b> Uses internal EDID (1080p@60Hz, 2CH Audio) for maximum compatibility. <b>TV:</b> Copies EDID from Output 1 (Supports 4K if detected).
6	<b>HDMI OUT</b>	Connect to HDMI displays (1~4).
7	<b>HDMI IN</b>	Connect to the source device (DVD, Blu-ray, PC, Console).
8	<b>DC 5V</b>	Connect the 5V DC power adapter.

## 7. Frequently Asked Questions

Q: What should I do if there is no video output?

A:

1. Check if the Power LED is on.
2. Ensure the "IN" LED is lit, indicating the source signal is received.
3. Try switching the EDID switch to "STD" mode to force a standard 1080p resolution, which rules out resolution incompatibility.

4. Check if the HDMI cables are securely connected and are of good quality.

## 8. Safety Instructions

- **Electric Shock Prevention:** Do not open the housing. Internal circuits contain sensitive components. Refer servicing to qualified personnel.
- **Surge Protection:** We highly recommend using a surge protection device to protect the equipment from electrical spikes and lightning strikes.