

4K Multi-Viewer Switcher

Model: CH42QK

Ultra HD 4K@30Hz Output | 4×HDMI Input & 1×HDMI Output | Zero-Blackout Switching | Flexible Multi-View Modes | Audio-Video Separation

一、Product Overview

CH42QK is a professional 4K multi-viewer switcher designed to integrate, display, and switch multiple HDMI signal sources with high precision. It features **4 HDMI input ports** (e.g., PCs, 4K cameras, test equipment) and **1 HDMI output port** (e.g., monitors, projectors) plus a dedicated 3.5mm analog audio output, enabling seamless audio-video separation.

Compliant with 4K@30Hz ultra-high-definition transmission standards, it maintains pixel-perfect, distortion-free images—even in dual-split mode—making it ideal for precision-driven scenarios such as medical imaging, semiconductor manufacturing, microscopic testing, and modern conference rooms. Equipped with zero-blackout instant switching, 8 preset scene storage (expandable to 16 via RS-232), and intuitive window management (drag, overlay, resize), it streamlines workflow efficiency and eliminates repetitive configuration.

二、Key Feature Highlights

1. 4K Ultra HD Resolution Support

- Delivers maximum input/output resolution of 4K@30Hz (3840x2160), ensuring sharp, detailed visuals for high-precision applications.
- Offers 5 selectable output resolutions (4K@30Hz, 3840x1080@30Hz, 2560x1440@60Hz, 1920x1080@60Hz, 1280x720@60Hz) to match diverse display devices.

1. 4×HDMI Input & 1×HDMI+Audio Output

- 4 HDMI input ports (Type A, 19-pin female) for simultaneous connection of multiple signal sources.
- 1 HDMI output port (Type A, 19-pin female) + 1 3.5mm analog audio output, supporting independent audio routing to external speakers.

1. Versatile Multi-View & PIP Modes

- Built-in 8 preset display modes to cover diverse needs:
 - Split-screen: 4-split, 3-split, 2-split (distortion-free), full-screen.
 - Picture-in-Picture (PiP): 1 large + 1 small, 1 large + 2 small, 1 large + 3 small.
- Intuitive interface for customizing window size, position, and layered overlapping—drag-and-drop to create personalized layouts.

1. Zero-Blackout Instant Switching

- Adopts advanced fast-switch technology: No blackouts, flickers, or delays when switching between signal sources, ensuring uninterrupted presentations and real-time monitoring.

1. Audio-Video Separation

- Dedicated 3.5mm audio jack decouples audio from video signals, allowing connection to external sound systems for enhanced audio quality (ideal for conference rooms or multimedia setups).

1. Flexible Control Methods

- Supports 3 control options for convenience:
 - IR remote control (10m+ effective range).
 - Front-panel physical buttons (for direct on-site operation).
 - RS-232 serial port (for industrial-grade remote control and data exchange).

1. Scene Storage & Expansion

- Saves up to 8 preset scenes via software, eliminating repetitive layout adjustments.
- Expandable to 16 preset scenes via RS-232 commands for complex, multi-scenario applications.

1. Distortion-Free & Adjustable Display

- Enables pixel-to-pixel, distortion-free display in horizontal/vertical dual-split modes—critical for high-precision fields (e.g., medical imaging, electronic testing).
- Allows free adjustment of signal source order in split-screen modes to align with user workflow.

三、 Detailed Specification Table

Model Name	CH42QK
Input Interfaces	4×HDMI (Type A, 19-pin female)
Output Interfaces	1×HDMI (Type A, 19-pin female); 1×3.5mm Analog Audio (for external speakers)
Supported Resolutions	- Input: Max. 3840x2160@30Hz (4K) - Output: 3840x2160@30Hz, 3840x1080@30Hz, 2560x1440@60Hz, 1920x1080@60Hz, 1280x720@60Hz (5 selectable options)

Presentation Display Modes	4-split, 3-split, 2-split (distortion-free), full-screen, Picture-in-Picture (1L+1S, 1L+2S, 1L+3S), non-distorted split
Item	Specification Details
Switching & Control	- Switching: Zero-blackout instant switching - Control Methods: IR Remote Control, Front-panel Buttons, RS-232 Commands
Special Functions	- Scene Storage: 8 preset scenes (expandable to 16 via RS-232) - Window Management: Drag, overlay, resize (custom layouts) - Screen Order: Adjustable signal source order - Audio-Video Separation: Independent 3.5mm audio output
Power Supply	DC 12V (certified original adapter)
Physical Dimensions	302mm × 152mm × 40mm
Weight	1 kg
Operating Environment	Temperature: 0–40°C (32–104°F); Relative Humidity: 20–90% RH (non-condensing)
Compatibility	Works with mainstream HDMI devices (PCs, 4K cameras, monitors, projectors)

四、 Important Notes for Use

1. 4K HDMI Cable Requirement

Use officially certified 4K HDMI cables to transmit 4K@30Hz signals. Inferior or uncertified cables may cause signal distortion, screen freezes, or no signal.

2. Avoid Unauthorized Daisy-Chaining

Do not daisy-chain uncertified switches, splitters, or converters to the CH42QK. For system expansion (e.g., adding more sources/displays), consult a professional technician to ensure stability.

3. Remote Control Batteries

Batteries are not included with the IR remote control (due to shipping safety regulations). Use compatible batteries as specified in the User Manual.

4. Scene Saving Precaution

Before switching to a new preset scene, save the current layout via the software or RS-232 commands. This avoids reconfiguring frequently used layouts and saves operation time.

5. Device Placement

Place the CH42QK in a well-ventilated, dust-free area to prevent overheating. Ensure no obstacles block the front-panel buttons or IR receiver (for remote control functionality).

Diagram



五、 Package Contents

Item	Quantity	Remarks
CH42QK Multi-Viewer Switcher Unit	1 unit	

DC Power Adapter (12V)	1 unit	
IR Remote Control	1 unit	Batteries not included)
User Manual	1 piece	

Core Advantages Summary

- ✓ 4K@30Hz ultra HD output with distortion-free display (ideal for medical/semiconductor applications)
- ✓ 4×HDMI input & 1×HDMI+3.5mm audio output for flexible AV signal distribution
- ✓ Versatile multi-view modes (split-screen/PiP) & customizable layouts to fit diverse scenarios
- ✓ Zero-blackout instant switching for uninterrupted presentations/monitoring
- ✓ Audio-video separation to enhance sound quality via external speakers
- ✓ Multiple control options (remote/front-panel/RS-232) for easy operation
- ✓ 8 preset scenes (expandable to 16) to eliminate repetitive configuration
- ✓ Adjustable screen order & pixel-perfect display for precision-driven workflows