CQ4120K_W

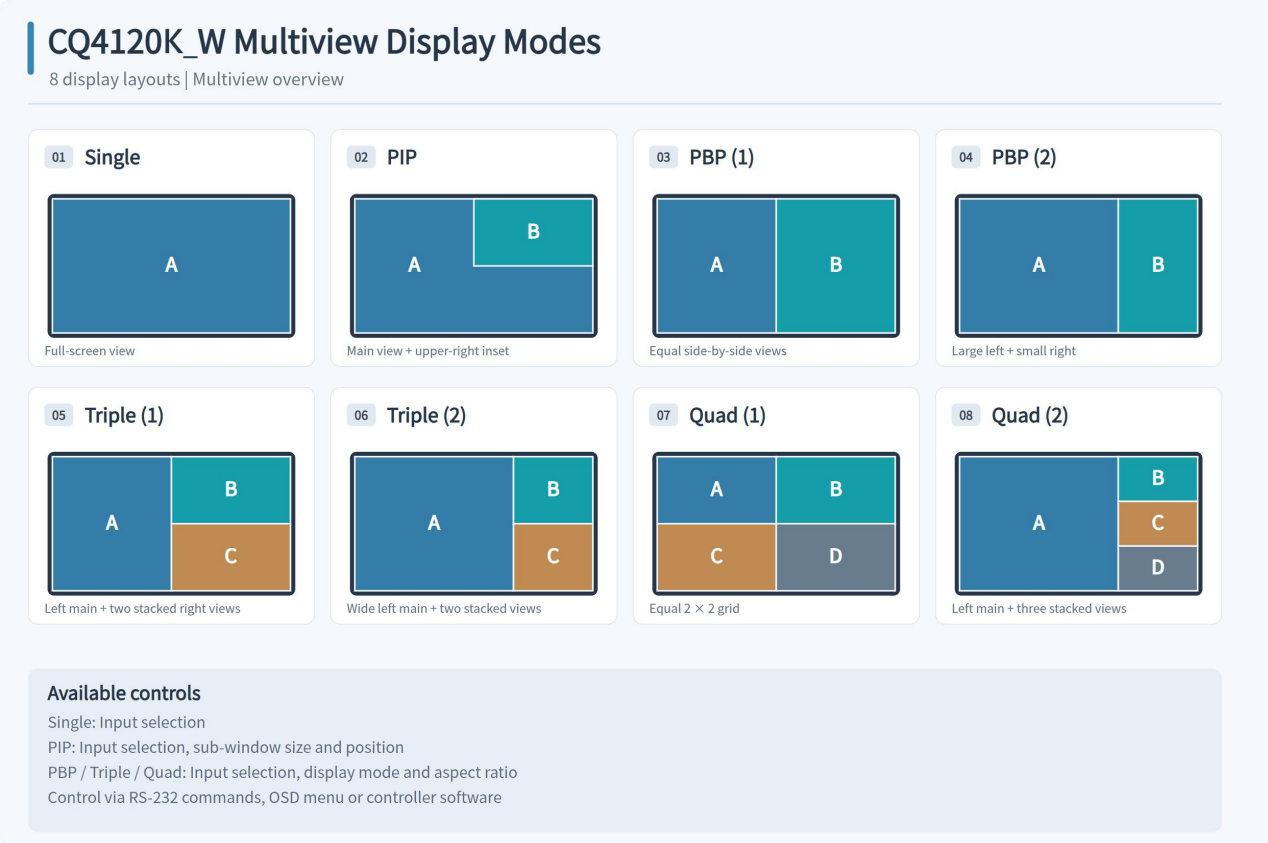
4K60 4-in-1-out Multi-View Seamless Switcher

4K@60Hz 4:4:4 · 18Gbps · HDMI 2.0b · 8 Multi-View Modes · Seamless Switching · Audio De-embedding

Product Overview

PANIO CQ4120K_W is a 4K@60Hz 4-in-1-out multi-view seamless switcher that accepts four HDMI inputs and combines them onto a single UHD/HD display in single-view or multi-view modes — ideal for meeting rooms, monitoring stations and multi-source collaboration.

A built-in scaler and multi-view engine support seamless and fast switching; with RCA analog and optical audio de-embedding, EDID management and an RS-232 control interface, it simplifies system integration and deployment.



Key Features

- **4K60 4:4:4 Ultimate Quality:** Full support for HDMI 2.0b, 18Gbps bandwidth and HDCP 2.2 — crisp text and detailed engineering charts without loss.
- **8 Multi-View Layouts:** One unit covers single-view, PIP, dual-view, triple-view and quad layouts — switch monitoring views with one touch.
- **Zero-Latency Seamless Switching:** Signal sources switch instantly in single-view mode with no black screen or tearing — meeting the strictest real-time control requirements.
- **Dual Analog + Optical Audio:** Independent audio de-embedding to follow Window 1 or any input source, with 0–100 digital volume trimming and mute.
- **Comprehensive Control Interfaces:** RS-232 serial, OSD on-screen menu, IR remote, front-panel buttons and PC control software — easy integration with AV control systems.
- **Powerful Scaler & EDID Management:** 19 built-in EDID modes and 15 forced output resolutions deliver high device compatibility — plug in and display, no tuning needed.
- **4-In 1-Out Multi-View Output:** Combine four HDMI signals onto a single UHD/HD screen.
- **HDCP 2.2 Compliant:** HDCP 2.2 and HDCP 1.x support for protected content playback.
- **Professional Metal Chassis:** Black metal housing combining heat dissipation and durability for stable long-term operation.
- **Flexible Installation:** Mounting brackets and rubber feet included for desktop, wall or rack deployment.

Specification

Parameter	Specification
Model	CQ4120K_W
Product Type	4K60 4-in-1-out multi-view seamless switcher (HDMI 4 in / 1 out)
Maximum Resolution	4K@60Hz (1080p / 720p backward compatible)
Bandwidth	18Gbps (HDMI 2.0b)

Standards	HDMI 2.0b, HDCP 2.2 / 1.x, EDID management
Video Inputs	4 × HDMI Type-A female (19-pin)
Video Output	1 × HDMI Type-A female (19-pin)
Audio Output	1 × RCA stereo (L/R); 1 × optical S/PDIF
Audio Format	HDMI up to 7.1 ch (PCM 2.0 / 5.1 / 7.1, Dolby Digital / Plus, DTS, DTS-HD)
Control Interface	1 × RS-232 (3-pin 3.81mm Phoenix); 1 × IR EXT (3.5mm)

CQ4120K_W Typical Application

4K60 4x1 Multiviewer Seamless Switcher | HDMI 2.0b · HDCP 2.2 · 8 Multiview Modes · Audio De-embed



Wiring: Sources → HD 1–HD 4; HD OUT → 4K display; R/L → speakers; OPTICAL → amplifier; RS-232 → control PC; IR EXT → IR receiver; DC 12V → power.

Interface & System Architecture

Interface	Description
Video Input	4 × HDMI Type-A female (19-pin)
Video Output	1 × HDMI Type-A female (19-pin)
Audio Output	1 × RCA stereo (L/R); 1 × optical S/PDIF
Control Interface	1 × RS-232 (3-pin 3.81mm Phoenix); 1 × IR EXT (3.5mm)
Display Modes	Single, PIP, PBP (1)/(2), Triple (1)/(2), Quad (1)/(2) — 8 modes in total
Switching	Seamless in single-view; fast switching in multi-view modes

Signal Distribution & Control

- **Exclusive Source Access:** In single-view mode only the selected input is shown; AUTO mode automatically switches to the active source.
- **Multi-View Composition:** In multi-view mode the four inputs can be freely arranged, with full-screen or 16:9 aspect ratio selection.

Mechanical & Connection

Parameter	Specification
Housing & Dimensions	Metal housing / black; 220 × 100 × 30 mm (W × D × H)
Weight	Approx. 620 g net
Power Supply	AC 100–240V, 50/60Hz; DC 12V / 2.5A locking adapter; max power 10W
Operating & Humidity	0–40°C; 20–80% RH, non-condensing

Package Contents

- **Switcher:** CQ4120K_W main unit × 1

- **Control Accessories:** IR remote × 1; 38KHz IR receiver cable (1.5 m) × 1
- **Installation Accessories:** Mounting brackets × 2; KM3×4 screws × 4; 3-pin 3.81mm Phoenix male connector × 1
- **Power & Documents:** DC 12V / 2.5A locking power adapter × 1; user manual × 1

Advanced Functions

- **Multi-View Switching:** Output four HDMI sources to a single 4K display in single-view or any of the 8 multi-view modes.
- **Seamless Display:** Scaler-supported output; seamless in single-view, fast switching in multi-view.
- **Audio & Control Integration:** RCA and optical audio outputs with front-panel, IR and RS-232 integrated control.
- **EDID & OSD Management:** 19 built-in EDID modes, configurable via the OSD menu or Controller software.
- **Professional Chassis:** Black metal housing for desktop or wall-mounted deployment.

Installation Recommendations

- **Cable Quality:** Use certified 18Gbps HDMI cables for stable 4K@60Hz transmission.
- **Ventilation:** Maintain adequate airflow and avoid prolonged high-load operation to prevent overheating.
- **Power Supply:** Use a stable 12V supply and never disconnect power during firmware upgrades.
- **Source Compatibility:** Ensure source devices support HDCP 2.2 / 1.x for protected content playback.
- **Control Integration:** RS-232 supports 115200 / 57600 / 38400 / 19200 / 9600 bps for control-system integration.