

## 2×1 HDMI 2.1 KVM Switch — 8K60, 4K120, HDCP 2.3

Share One 8K Display, Keyboard & Mouse Between Two PCs with USB 3.0, VRR & Zero Latency

MPN: KVM-2X1HDMI8K

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## 1. Introduction

Switches one 8K display, keyboard, mouse, and USB peripherals between two PCs — with HDMI 2.1 supporting 8K@60Hz, 4K@120/144Hz, and 1080p@240Hz for gaming, creative, and professional workflows. The KVM-2X1HDMI8K is the most affordable HDMI 2.1 KVM with VRR, ALLM, and zero-latency switching.

Purpose-built for gamers, content creators, and professionals who need the highest resolution and refresh rate from a single-monitor KVM. 40Gbps bandwidth handles 8K and 4K high-refresh without compression. HDCP 2.3 ensures protected content plays without issues. USB 3.0 at 5Gbps shares webcams, storage, and peripherals. Keyboard/mouse hotkeys, front-panel button, IR remote, and RS-232 provide four switching methods. EDID emulators on both inputs prevent handshake delays. Ships with 2× HDMI + 2× USB cables. CEC pass-through supported.

## 2. Features

- HDMI 2.1, HDCP 2.3 compliant — 40Gbps bandwidth, 8K@60Hz 4:2:0, 4K@120/144Hz, 1080p@240Hz
- VRR, ALLM, QMS, QFT, SBTM — full HDMI 2.1 gaming feature set for tear-free gameplay
- USB 3.0 sharing at 5Gbps — webcams, printers, scanners, and storage follow the active PC
- HDR, HDR10, HDR10+, Dolby Vision, HLG pass-through with zero video and audio latency
- Four switching methods: front-panel SELECT, keyboard/mouse hotkeys, IR remote, RS-232
- Auto-switch detects source connect/disconnect and switches automatically
- Built-in EDID emulators on both inputs — instant resolution lock, no handshake delays
- CEC pass-through for display power control
- 3.5mm analog audio extraction • Ships with 2× HDMI + 2× USB cables, IR remote, mounting ears • Ultra-compact 175×100×30mm

## 3. Package Contents

- 1× 8K60 2×1 KVM Switcher
- 1× IR Remote + IR Receiver Cable
- 1× 3-pin Phoenix Connector
- 2× USB 3.0 A-to-B Cable (1.8m)
- 2× HDMI Cable (1.5m)
- 2× Mounting Ears + Screws
- 1× 12V/1A Multinational Locking PSU
- 1× User Manual

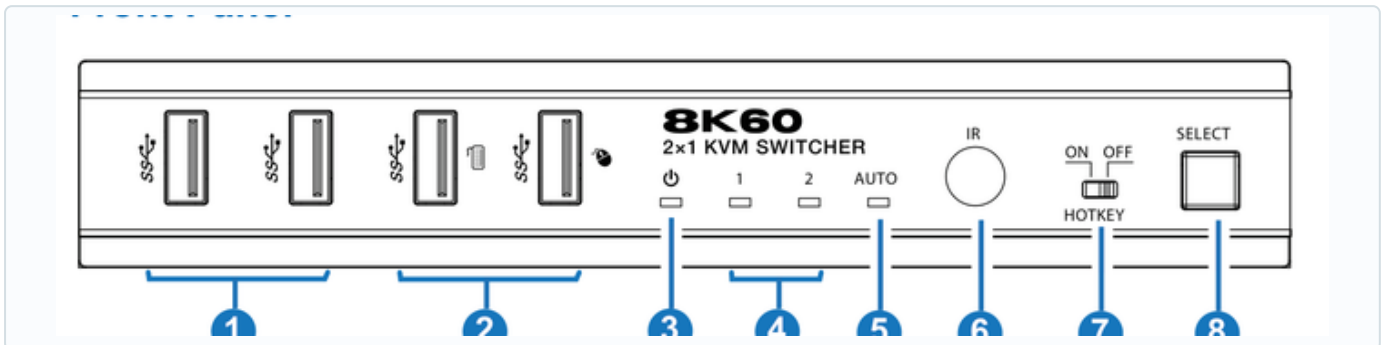


## 4. Specifications

Technical	
HDMI / HDCP	HDMI 2.1, HDCP 2.3
Video	8K60 4:2:0 10-bit • 4K120/144 • 1080p240 • 40 Gbps
HDMI 2.1	VRR • ALLM • QMS • QFT • SBTM • CEC
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio	LPCM, DD/TrueHD/Atmos, DTS-HD MA/DTS:X, DSD
Analog Audio	3.5mm L/R — PCM 2.0
Connection	
Inputs	2× HDMI Type A + 2× USB-B Host
Output	1× HDMI Type A + 3.5mm Audio
USB Device	4× USB-A 3.0 (2 hotkey + 2 device)
Control	RS-232 (3-pin phoenix) • IR EXT (3.5mm)
Mechanical	
Dimensions	175 × 100 × 30mm — 506g
Power	DC 12V/1A • 7W typ • CE/FCC/UL

## 5. Operation Controls

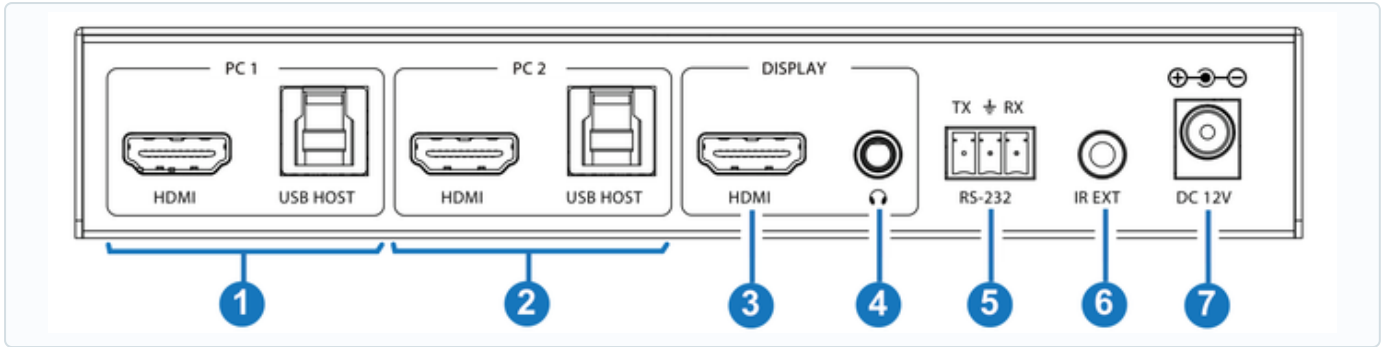
### 5.1 Front Panel



NO.	NAME	FUNCTION
1	USB 3.0 Ports	USB 3.2 Gen 1 device (flash, camera, printer).
2	USB 3.0 (Hotkey)	OFF: USB 3.2 Gen 1. ON: USB 1.1 KB/mouse.
3	Power LED	Green=active. Red=standby.
4	Input LED 1/2	Green=selected channel.
5	AUTO LED	Green=auto-switch enabled.
6	IR Window	38KHz IR receiver.
7	HOTKEY Switch	ON/OFF for KB/mouse hotkeys.
8	SELECT	Cycle between PC 1 and PC 2.



## 5.2 Rear Panel



NO.	NAME	FUNCTION
1	PC 1 Ports	HDMI + USB-B Host — connect to PC 1.
2	PC 2 Ports	HDMI + USB-B Host — connect to PC 2.
3	DISPLAY HDMI	HDMI output to 8K/4K display.
4	L/R Audio	3.5mm analog audio output.
5	RS-232	3-pin phoenix (115200 baud).
6	IR EXT	38KHz IR receiver cable.
7	DC 12V	12V/1A locking PSU.

## 6. Hotkey & RS-232

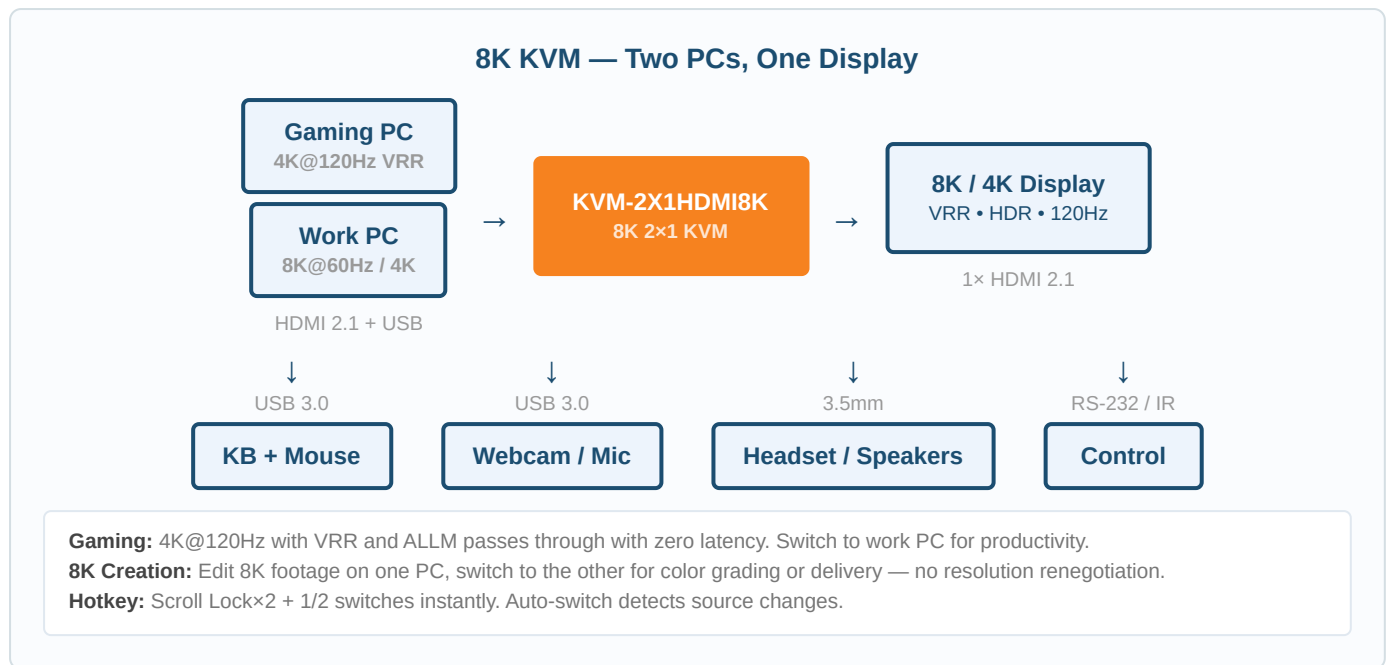
HOTKEY (SCROLL LOCK×2)	FUNCTION
→ 1 / 2	Switch to PC 1 / PC 2
→ PgUp / PgDn	Previous / next input
→ F12	Toggle buzzer

Alt: Ctrl×2 instead of Scroll Lock×2. Mouse: double-click scroll + R/L.

RS-232 COMMAND	FUNCTION
power z!	Power on/off (z=0/1)
s input/usb z!	Switch to PC z (1/2)
s auto switch x!	Auto-switch (x=0/1)
s beep z!	Buzzer (z=0/1)
r status!	Full device status
reset!	Factory reset



## 7. Application Example



## 8. Troubleshooting

**Q: No 8K or 4K120 output?**

**A:** Use Ultra High Speed HDMI 2.1 cable (48Gbps rated, ≤2m for 8K). Verify display supports the target resolution. Check source GPU output settings.

**Q: VRR not working?**

**A:** Enable VRR/FreeSync/G-SYNC Compatible in both GPU settings and display OSD. Verify HDMI 2.1 cables on both source and display side.

**Q: USB peripherals slow?**

**A:** When Hotkey ON, front hotkey ports drop to USB 1.1. Use the rear USB 3.0 device ports for storage and webcams.

**Q: Auto-switch keeps toggling?**

**A:** Disable auto-switch: `s auto switch 0!` — this prevents toggling when a PC sleeps/wakes.

