8K 1×2 HDMI 2.1 Splitter with Auto Downscaling

48Gbps, HDCP 2.3, HDR?SDR Converting, Dolby Atmos/DTS:X, EDID DIP



Split one 8K HDMI 2.1 source to two displays with automatic downscaling and HDR-to-SDR conversion — enabling mixed-resolution environments without manual configuration. The KanexPro SP-HD1X28K delivers 48Gbps bandwidth and supports resolutions up to 8K@60Hz 4:2:0 12-bit and 4K@120Hz 4:4:4 12-bit. Its auto downscaling independently adjusts each output (8K→4K or 8K/4K→1080p) based on connected display capabilities, while HDR-to-SDR conversion ensures compatibility with legacy SDR displays.

HDMI 2.1 and HDCP 2.3 compliant. Supports VRR, ALLM, QMS, QFT, and SBTM. Full HDR pass-through (HDR10, HDR10+, Dolby Vision, HLG). Audio includes LPCM 7.1CH, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, and DTS:X. 8-mode EDID DIP switch for deterministic resolution control. Metal enclosure (95 × 68 × 18 mm, 177 g), 4.3W max, with USB-C service port for firmware updates.

Surge Protection Recommended — This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection systems is highly recommended.

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1. Features

- ✓ HDCP 2.3 compliant
- ✓ Support 48Gbps FRL and 18Gbps TMDS video bandwidth
- ✓ Support video resolution up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit, as specified in HDMI 2.1
- ✓ HDMI 2.1 protocols: VRR, ALLM, QMS, QFT, SBTM are supported
- ✓ Support HDR, HDR 10, HDR 10+, Dolby Vision, HLG pass-through
- ✓ LPCM 7.1CH, Dolby TrueHD, Atmos and DTS-HD Master, DTS:X Audio pass-through
- ✓ 8K to 4K or 8K/4K to 1080P auto downscaling on all outputs
- ✓ HDR to SDR auto converting on all outputs
- ✓ Advanced EDID management
- ✓ Compact design for easy and flexible installation

2. Package Contents

- ✓ 1 × 48Gbps 1×2 Splitter
- ✓ 1 × 5V/2A Multinational Power Supply

3. Specifications

TECHNICAL	
HDMI Compliance	HDMI 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution	Up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	LPCM, Dolby Digital/Plus/EX, Dolby TrueHD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD
ESD Protection	IEC 61000-4-2: ±8kV (air-gap) & ±4kV (contact)
CONNECTION	
Input	1 × HDMI IN [Type A, 19-pin female]
Output	2 × HDMI OUT [Type A, 19-pin female]
Control	1 × SERVICE [USB Type-C, Update port]
MECHANICAL	
Housing	Metal Enclosure
Color	Black
Dimensions	95mm (W) × 68mm (D) × 18mm (H)
Weight	177g
Power Supply	Input: AC 100–240V 50/60Hz, Output: DC 5V/2A (CE/FCC/UL certified)
Power Consumption	4.3W (Max)

continued

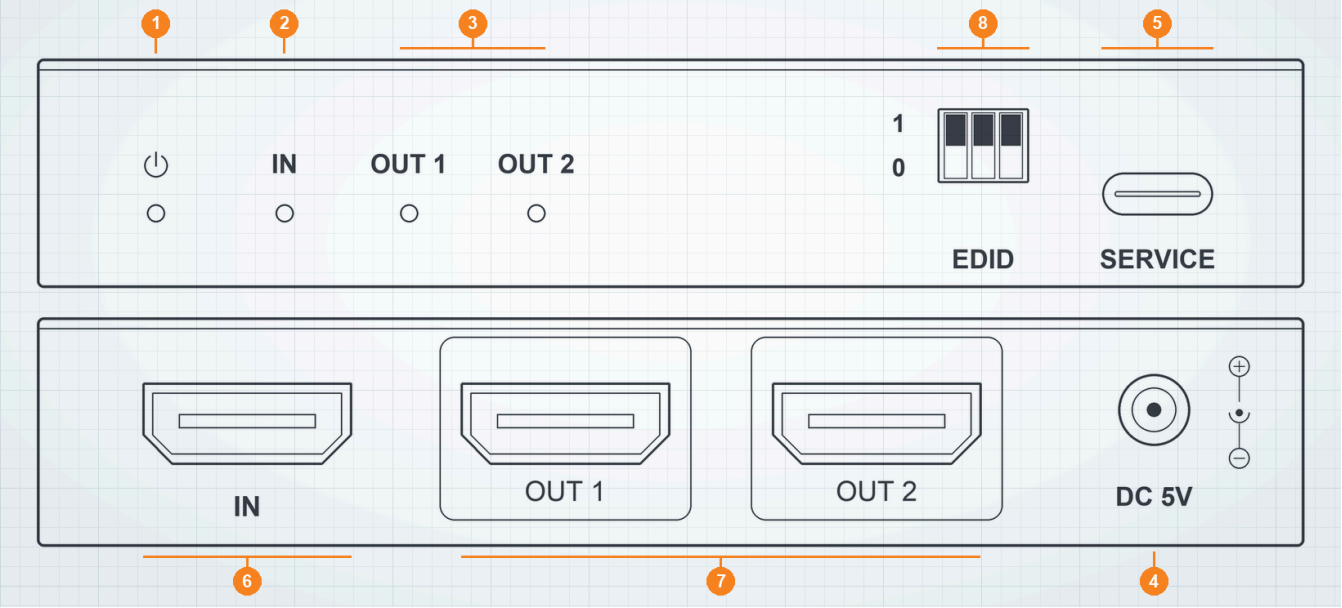
Operating Temperature	0°C – 40°C / 32°F – 104°F
Storage Temperature	−20°C – 60°C / −4°F – 140°F
Relative Humidity	20–90% RH (Non-condensing)

4. Introduction

The SP-HD1X28K is an 8K 1×2 HDMI 2.1 splitter with auto downscaling. It sends one 8K HDMI 2.1 source to two displays. Each output is automatically downscaled and converted from HDR to SDR to suit the display connected to it.

The splitter supports 48Gbps bandwidth, up to 8K@60Hz 4:2:0 12-bit, and 4K@120Hz 4:4:4 12-bit. Auto downscaling sets each output independently, based on what that display can show. HDR-to-SDR conversion lets older SDR displays show an HDR source correctly. The splitter also supports HDCP 2.3, passes Dolby Atmos and DTS:X audio, and has a DIP switch for EDID management.

5. Panel descriptions



Front & Rear Panels

The manual calls this table "Operation Controls." It numbers the controls 1 to 8 but does not say which items are on the front panel and which are on the rear, so the table keeps the manual's numbers and row order exactly.

No.	Name	Function
1	**Power LED**	Lights red when the unit is powered on.
2	**IN LED**	Lights green when an active source is connected.
3	**OUT 1–2 LEDs**	Each lights green when its output is active. Each output is downscaled independently.
4	**DC 5V**	Connect the supplied 5V/2A power supply here.
5	**SERVICE**	USB-C port for firmware updates.
6	**HDMI IN**	Connect your HDMI source here.
7	**OUT 1–2**	Two HDMI outputs, each with automatic downscaling. Connect your displays here.

continued

No.	Name	Function
8	EDID DIP	8-mode DIP switch for EDID management. See EDID DIP Settings below.

6. EDID DIP Settings

Use the three-position EDID DIP switch to choose the EDID the splitter reports to your source. The KanexPro default is 111, which copies the EDID of the display connected to OUT 1.

DIP	MODE
111	Copy OUT1 EDID (default)
110	4K60 4:4:4, 2.0CH
101	FRL12G 8K HDR, 2.0CH
100	FRL12G 8K HDR, 5.1CH
011	FRL12G 8K HDR, 7.1CH
010	FRL10G 8K HDR, 2.0CH
001	FRL10G 8K HDR, 5.1CH
000	FRL10G 8K HDR, 7.1CH

7. Auto Downscaling & Converting

Each output is downscaled and converted from HDR to SDR on its own. The splitter reads the EDID of each connected display and chooses the right resolution and HDR mode for that output. A capable display gets the source unchanged, and a less capable display gets a signal it can show.

For example, with an 8K HDR source, an 8K HDR TV on OUT 1 receives the 8K HDR signal unchanged (bypass). A 4K SDR TV on OUT 2 receives a 4K SDR signal that has been downscaled and converted.

Similarly, with a 4K HDR source, a 4K HDR TV on OUT 1 receives the 4K HDR signal unchanged. A 1080p TV on OUT 2 receives a 1080p SDR signal that has been downscaled and converted.

8. Troubleshooting

There is no signal on one or both outputs.

1. Make sure you are using Ultra High Speed HDMI cables. For 8K, keep each cable to 3m or less. 2. Try a different EDID DIP setting. 3. Power-cycle the splitter. 4. Check that the display supports the resolution being sent.

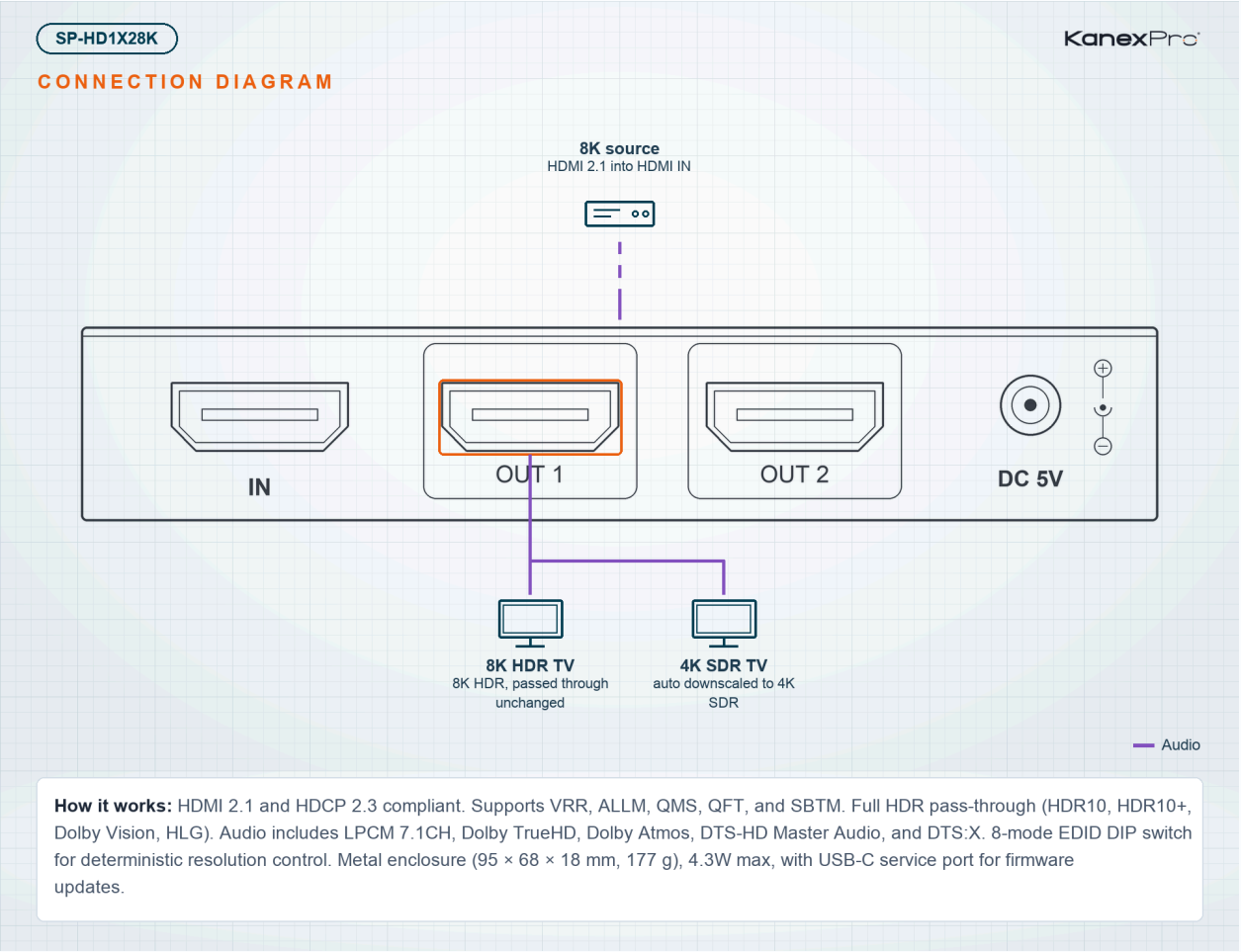
Downscaling is not working.

1. Downscaling does not work with an 8K DSC input. Check what format your source is sending. 2. Make sure the splitter is reading the display's EDID correctly. Try the default EDID DIP setting, 111. 3. Power-cycle both the splitter and the displays.

There is no audio on a downscaled output.

A display running in DVI mode will not play audio when it receives downscaled 1080p. Make sure the display supports HDMI audio at the downscaled resolution.

9. Connection Diagram



How it works: HDMI 2.1 and HDCP 2.3 compliant. Supports VRR, ALLM, QMS, QFT, and SBTM. Full HDR pass-through (HDR10, HDR10+, Dolby Vision, HLG). Audio includes LPCM 7.1CH, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, and DTS:X. 8-mode EDID DIP switch for deterministic resolution control. Metal enclosure (95 × 68 × 18 mm, 177 g), 4.3W max, with USB-C service port for firmware updates.

10. Troubleshooting

Q: The Power LED does not light.
A: The Power LED lights red when the unit has power. Check that the supplied 5V/2A power supply is plugged into DC 5V and into a live outlet, then power-cycle the splitter.

Q: The IN LED stays off.
A: The IN LED lights green only when an active source is connected. Make sure the source is switched on and is connected to HDMI IN with an Ultra High Speed HDMI cable, then power-cycle the splitter.

Q: One of the OUT LEDs stays off.
A: Each OUT LED lights green when its output is active. Check that the display is connected to that output with an Ultra High Speed HDMI cable, 3m or less for 8K, and that the display supports the resolution being sent. If the LED is still off, try a different EDID DIP setting and power-cycle the splitter.

Need help? — For additional support, visit kanexpro.com/support, or scan the QR code below for the product page.

11. Installation FAQ

Q: How do I connect the SP-HD1X28K?
A: Connect your source to HDMI IN and your two displays to OUT 1 and OUT 2, then plug the supplied 5V/2A power supply into DC 5V. The splitter reads each display's EDID and sends each one its own resolution, in HDR or SDR. You do not need to set anything up.

Q: What HDMI cables should I use, and how long can they be?
A: Use Ultra High Speed HDMI cables. For 8K, keep each cable to 3m or less.

Q: How is the splitter powered?
A: It runs on DC 5V/2A from the included multinational power supply, which takes AC 100-240V 50/60Hz. Use surge protection on the power supply, because power surges and lightning strikes can damage the unit.

Q: What operating environment does it need?
A: It runs at 0C to 40C (32F to 104F) and 20-90% relative humidity, non-condensing. It can be stored at -20C to 60C (-4F to 140F).

12. Integration FAQ

Q: Can one source feed an 8K HDR TV and a 4K SDR TV at the same time?
A: Yes. With an 8K HDR source, an 8K HDR TV on OUT 1 gets the signal unchanged, and a 4K SDR TV on OUT 2 gets a downscaled 4K SDR signal. Each output is handled on its own.

Q: Which display's capabilities does the source see by default?
A: At the default DIP setting, 111, the splitter copies the EDID of the display on OUT 1, so the source formats its output for that display. You can set the DIP switch to a fixed EDID instead, choosing 4K60 or one of the FRL 8K HDR modes with 2.0, 5.1 or 7.1 channel audio.

Q: How is the splitter controlled in a system?
A: It works on its own and needs no control system. The EDID is set with the DIP switch, and the USB-C SERVICE port is used for firmware updates.

Q: Can a 1080p display share a 4K HDR source with a 4K HDR display?
A: Yes. With a 4K HDR source, the 4K HDR TV gets the signal unchanged and the 1080p TV gets a downscaled 1080p SDR signal. Downscaling does not work with 8K DSC sources.