



TIVA® SPAN 14

8K HDMI™ 1X4 SPLITTER AND AUDIO EXTRACTOR

LDSPAV14;

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1 INTRODUCTION

1.1 YOU MADE THE RIGHT CHOICE!

This product has been developed and manufactured to the highest quality standards to ensure many years of problem-free operation. Find further information about LD Systems on our website:

<https://www.ld-systems.com/>

1.2 CONTACTS

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Postal code / city	61267 Neu-Anspach	61267 Neu-Anspach
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1.3 LINK TO THE DOWNLOAD CENTRE



You can download some information, such as CAD data or technical data, from the Download Centre. Scan the QR code or click the link to download this information:

1.4 VISUALISATION CONVENTIONS IN THIS USER MANUAL

In this manual we use graphical symbols and icons in certain contexts. Find below a table with explanations and use cases of the graphical symbols and icons.

Icon / Symbol	Designation	Context	Explanation / Example
✓	Prerequisite	Tasks	Used in task topics to indicate a prerequisite that must be met before beginning the task.
⇒	Result / Intermediate Result	Tasks	Used in task topics to indicate a result or intermediate result of an action step.
1 Step a) Substep	1 Action Step a) Substep	Tasks	Used in task topics to indicate action steps and substeps.

Icon / Symbol	Designation	Context	Explanation / Example
1	Callout	Graphics; tasks	Text-image reference or labeling of certain functions on the device
[...]	Value range indicator	Technical data; paragraphs; lists	Indicates the range of a value, such as "Compressor ratio: 1:1...20:1 ". Mostly used in tables or callouts.
*	Asterisk	Paragraphs; tables	Indicates additional information in a footnote.
The LIM LED lights up	General User Interface element	Paragraphs; tasks; tables; lists	The words presented in this way represent graphic user interface elements on the device.
PAGE button	Key / Button	Paragraphs; tasks; tables; lists	The words presented in this way represent user interface controls on the device.
<name>	User input	Paragraphs; tasks; tables; lists	The words presented in this way represent required user inputs.
<u>https://adamhall.com</u>	Weblink	Paragraphs; tables; lists	External link to a website

2 PRODUCT COMPLIANCE

2.1 MANUFACTURER'S DECLARATION

Adam Hall offers a voluntary, EU-wide manufacturer's guarantee of 5 years. The statutory warranty period is not affected by this voluntary guarantee.

Visit the Adam Hall Service Portal to access the **Download Centre**:

<https://portal.adamhall.com/>

Under the **Service & Regulations** section, you find our current detailed manufacturer's declarations, warranty conditions, and limitation of liability.

To request warranty for a product, please contact:

Adam Hall GmbH, Adam-Hall-Str. 1, 61267 Neu-Anspach

customerservice@adamhall.com

0049 (0)6081 / 9419-1000

2.2 DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY



Adam Hall GmbH hereby confirms that this product meets the following guidelines (where applicable):

- Low-Voltage Directive (2014/35/EU)
- EMC Directive (2014/30/EU)
- RoHS (2011/65/EU)
- RED (2014/53/EU)

Declarations of conformity for products subject to the LVD, EMC, RoHS Directive can be requested from info@adamhall.com. Declarations of conformity for products subject to RED can be downloaded from

<http://www.adamhall.com/compliance>.

3 SAFETY INSTRUCTIONS

3.1 INTENDED USE

This 8K HDMI™ Splitter sends the input signal to up to 4 HDMI outputs simultaneously. It also provides analog stereo audio extraction via 3.5 mm mini-jack connector.

This product has been developed for the professional use in the field of event technology. Furthermore it is intended for qualified users with specialist knowledge of event technology only.

This product is intended for fixed installation and not for mobile application.

This product is intended for indoor use only.

This product is not suitable for domestic use.

Do not use the product outside the operating conditions as stated in the user manual under Technical Data. Liability for damage and third-party damage to persons and property due to inappropriate use is excluded.

This product is not suitable for children and persons with limited physical, sensory, or mental capabilities or lack of experience and knowledge.

3.2 EXPLANATION OF SAFETY AND WARNING SYMBOLS

Find the following safety and warning symbols on the device, the user manual, or the packaging:



This symbol indicates that you must read the complete user manual before using the product.



This symbol indicates a general hazardous situation.



This symbol indicates hazards that can cause electric shock.



This symbol indicates that the product is for indoor use only.



This symbol indicates that the product is not suitable for household use.



This symbol indicates that the product has no serviceable parts. Only authorized personnel is allowed to perform maintenance or service work.



This symbol indicates helpful hints or additional information.

3.3 STRUCTURE OF WARNING MESSAGES

In this user manual, warning messages are structured with a safety symbol, a signal word, a hazard description, and instructions on how to avoid injuries or death.

**DANGER**

Indicates a hazardous situation which will result in death or serious injury.

**WARNING**

Indicates a hazardous situation which could result in death or serious injury

**CAUTION**

Indicates a hazardous situation which could result in minor or moderate injury.

**NOTICE**

Indicates situations or conditions that could result in damage to property and/or the environment.

3.4

GENERAL SAFETY



- Read this document carefully.
- Keep this document for later reference.
- Follow closely the instructions in this document.
- This document is an integral part of the product. If you sell or pass on the product, you must include this document.
- Only use this product according to its intended use.
- Risk of choking. Keep small parts away from children and individuals with impaired physical, sensory, or mental capabilities.
- Risk of suffocation. Keep plastic bags away from children and individuals with impaired physical, sensory, or mental capabilities.
- Observe all safety instructions and warning messages in this document, on the device, and on the packaging.
- Products are subject to continuous further development. If you find discrepancies between this document and the product labeling, the information on the product always takes priority.
- Do not remove safety instructions or warning messages from the product.
- Do not open the device.
- Do not modify the product.
- If the product shows any sign of damage, do not use it.
- Do not operate the product with removed or missing covers.
- Do not expose the product to direct sunlight.

- If not further specified in the user manual under Technical Data, do not use the product in ambient temperatures that exceed 40 °C / 104 °F or fall below 0 °C / 32 °F
- Do not use the product in tropical climate.
- Do not use the product above 2000 metres of altitude.
- Unless otherwise stated, do not use the product under marine conditions.
- Use only accessories specified by the manufacturer.
- Maintenance and repairs may only be carried out by authorized service personnel.
- Store and transport the product in a dry and safe environment.
- Clean the product on a regular basis. If applicable, see the user manual for maintenance intervals.
- If the device was exposed to strong temperature changes, such as during transport, do not switch it on immediately. Wait until the device has reached ambient temperature.

3.5

ELECTRICAL SAFETY



- This is an electrical device in protection class III, using safety extra-low voltage (SELV) or protective extra-low voltage (PELV).
- Do not bypass the mains fuse.
- Use only mains fuses as specified by the manufacturer.
- Do not use kinked or otherwise damaged power cables.
- Only operate the device on compliant, tested and intact mains power outlets.
- Do not use the device in the vicinity of water. Keep the device away from splashing or dripping water.
- Make sure that the voltage and frequency of the mains power match the values specified by the manufacturer.
- Take suitable measures against overvoltage, such as lightning strikes.
- For devices with a power out connector, make sure the total current consumption of all connected devices does not exceed the value specified by the manufacturer.
- This device is suitable for continuous current.
- Disconnect the device from all poles before maintenance, repair or extend periods of non-use.
- Permanently connected power cables may only be replaced by a qualified service technician.

3.6

THERMAL SAFETY

- Do not install the device near heat sources, such as radiators or ovens.
- Do not block any ventilation openings.
- Unless otherwise stated, keep a minimum clearance of at least 20 centimetres around the device.
- Unless otherwise stated, keep flammable materials, such as paper or wood, at least 50 centimetres away from the device

3.7**DEVICE SAFETY**

- Do not switch the device on and off in quick succession, because this will shorten the device lifetime.

4 PRODUCT DESCRIPTION

4.1

PRODUCT OVERVIEW

This 1x4 splitter distributes one HDMI source signal to up to four display devices.

INTEGRATION-FRIENDLY FEATURES:

- **VRR (Variable Refresh Rate)**

Helps maintain smooth video playback across multiple displays by synchronising refresh rates with the source, reducing visual artifacts like tearing—especially useful in dynamic signage or live content distribution.

- **ALLM (Auto Low Latency Mode)**

Ensures that connected displays automatically switch to low-latency mode, minimizing delay in real-time applications such as live events, interactive kiosks, or control rooms.

- **QMS (Quick Media Switching)**

Prevents black screens when switching between HDMI sources with identical video formats, enabling seamless transitions in multi-source environments like conference rooms or digital signage setups.

- **QFT (Quick Frame Transport)**

Reduces latency in frame delivery, which is beneficial for time-sensitive AV applications such as live monitoring, video conferencing, or synchronized multi-display setups.

- **SBTM (Source-Based Tone Mapping)**

Allows the source to optimize HDR output based on each display's capabilities, ensuring consistent and accurate image quality across different screens in professional installations.

- **Advanced EDID management**

Provides flexible control over display capabilities communicated to the source, allowing integrators to resolve compatibility issues, force specific resolutions, or optimize signal routing in complex AV setups.

PERFORMANCE-ENHANCING FEATURES:

- **Cable equalisation**

The **SPAV 14** features built-in HDMI chip technology that automatically adjusts and boosts signal strength to compensate for losses over longer or lower-quality HDMI cables. This process includes filtering and reshaping the signal to restore its integrity, ensuring stable video transmission and consistent performance across all outputs in professional AV installations.

- **Supports High Bandwidth Formats**

Compatible with both 48Gbps FRL and 18Gbps TMDS video bandwidths for reliable distribution of high-resolution content, as defined by the HDMI 2.1 specification:

- Up to 8K@60Hz (4:2:0, 12-bit)
- 4K@120Hz (4:4:4, 12-bit)
- 8K@30Hz (4:4:4, 12-bit)

- **Smart Output Scaling :**

Each output port can automatically downscale or convert the resolution based on the connected display's capabilities. This ensures compatibility across mixed display setups without manual configuration, simplifying system integration.

COMPATIBILITY FEATURES:

- HDCP (High-bandwidth Digital Content Protection) 2.3 compliant
- HDR (High Dynamic Range), HDR10, HDR10+, Dolby Vision, HLG (Hybrid Log-Gamma) pass-through
- HDMI audio formats: LPCM 7.1CH, Dolby TrueHD, Atmos, DTS-HD Master Audio

4.2
TECHNICAL DATA

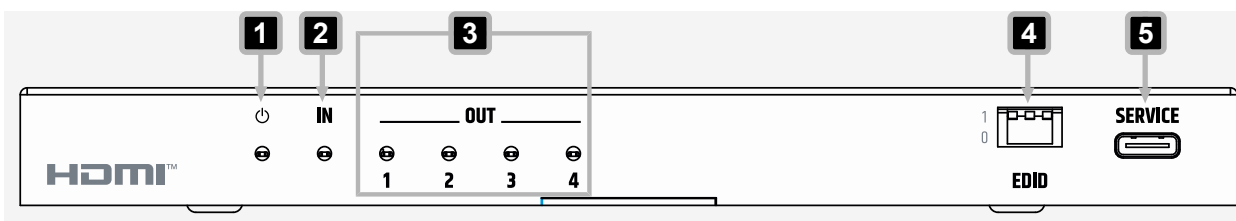
Technical	
HDMI compliance	HDMI 2.1
HDCP compliance	HDCP 2.3, HDCP 1.4
Video bandwidth	48Gbps FRL and 18Gbps TMDS
Video resolution	Up to 8K@60Hz 4:2:0 12bit, 4K@120Hz 4:4:4 12bit, 8K@30Hz 4:4:4 12bit
Color depth	8/10/12-bit
Color space	RGB, YCbCr 4:4:4 / 4:2:2. YUV 4:2:0
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio formats	HDMI input/output: LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD Audio de-embedding output: Optical: LPCM/Dolby/DTS 5.1CH Analog: LPCM 2CH
ESD protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Input	1 × HDMI IN [Type A, 19-pin female]
Output	4 × HDMI OUT [Type A, 19-pin female] 1 × OPTICAL [S/PDIF] 1 × L/R [3.5mm Stereo Mini-jack]
Control	1 × SERVICE [USB Type C, Update port]
Mechanical	
Housing	Metal enclosure
Colour	Black
Dimensions	176 mm (W) × 68 mm (D) × 18 mm (H)
Weight	295 g

Mechanical	
Power supply	Input: AC 100-240V 50/60Hz Output: DC 5V (US/EU standards, CE/FCC/UL certified)
Power consumption	6 W (Max)
Operating temperature	0°C ... 40°C / 32°F ... 104°F
Storage temperature	-20°C ... 60°C / -4°F ... 140°F
Relative Humidity	20% ... 90% (non-condensing)

Recommended HDMI Cable				
Video resolution	8K	4K60	4K24	1080P
HDMI Cable Length (HDMI IN / OUT)	3 m / 10 ft (Ultra HDMI 2.1)	8 m / 26 ft	12 m / 39 ft	15 m / 49 ft
The use of "Premium High Speed HDMI" cable is highly recommended. Further information and ordering options are available here: 4 STAR HDMI 0300				

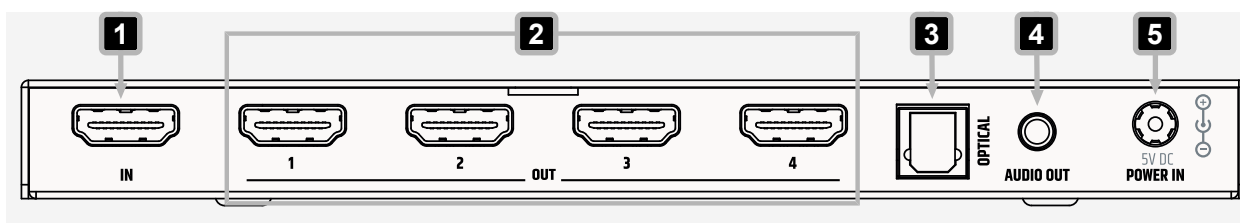
4.3 USER INTERFACE

4.3.1 FRONT PANEL OVERVIEW



- 1** - LED, that lights up white as soon as the device is powered on.
- 2** **IN** - LED, that lights up white when the HDMI **IN** port is connected to an active source device.
- 3** **OUT 1 ... 4** - LEDs light up white to indicate that a connected display is actively receiving a video signal from the corresponding output port.
- 4** **EDID** - Allows EDID configurations via dip-switch unit.
- 5** **SERVICE** - USB-C port that provides access for authorised personnel to perform firmware updates, diagnostics, or other service-related tasks. It is not required for normal operation.

4.3.2 REAR PANEL OVERVIEW



- 1** IN - HDMI port, that receives signals from an HDMI source device
- 2** OUT 1 ... 4 - HDMI ports, that send signals to HDMI display devices
- 3** OPTICAL - Optical output that sends digital audio using the S/PDIF (Sony/Philips Digital Interface) protocol to compatible devices.
- 4** AUDIO OUT - 3.5 mm Stereo Mini-jack, that sends analog stereo audio signals
- 5** POWER IN - 5V DC input port, that supplies power to the device

5 PREPARATION

5.1 SCOPE OF DELIVERY

- Device
- 5 V / 2 A multinational power supply
- Safety Compliance Information (en, de, fr, it, pl, es)

6 OPERATION

6.1 POWER SUPPLY

6.1.1 CONNECTING A MAINS POWER CABLE

- 1 Plug the DC plug of the power adapter cable into the device's 5V DC input port.
- 2 Plug the two-pin AC plug into a mains socket.
⇒ The device turns on and is operational.

6.1.2 TURNING THE DEVICE ON OR OFF



The device automatically turns on when connected to a power source using the included AC-DC adaptor.

- 1 Plug in the power source to turn the device on.
- 2 Remove the power source to turn the device off.

6.2 EXTENDED DISPLAY IDENTIFICATION DATA (EDID) MODE

6.2.1 ABOUT EDID MODE

EDID stands for Extended Display Identification Data. It is a standardised data format used by display devices (such as monitors, TVs, or projectors) to communicate information to a video source.

This includes information such as:

- Supported resolutions (e.g. 1080p, 4K, 8K)
- Refresh rates
- Audio formats (e.g. stereo, 5.1, 7.1)
- Colour depth and HDR support

6.2.2 USING THE DIP SWITCH UNIT

FACTORY DEFAULT SETTING

- 1 Set the DIP switches to '1-1-1 to activate the EDID copy mode.



This will copy the EDID from the connected display on output port 1 and use it as the source configuration (factory default).

PREDEFINED EDID SETTINGS

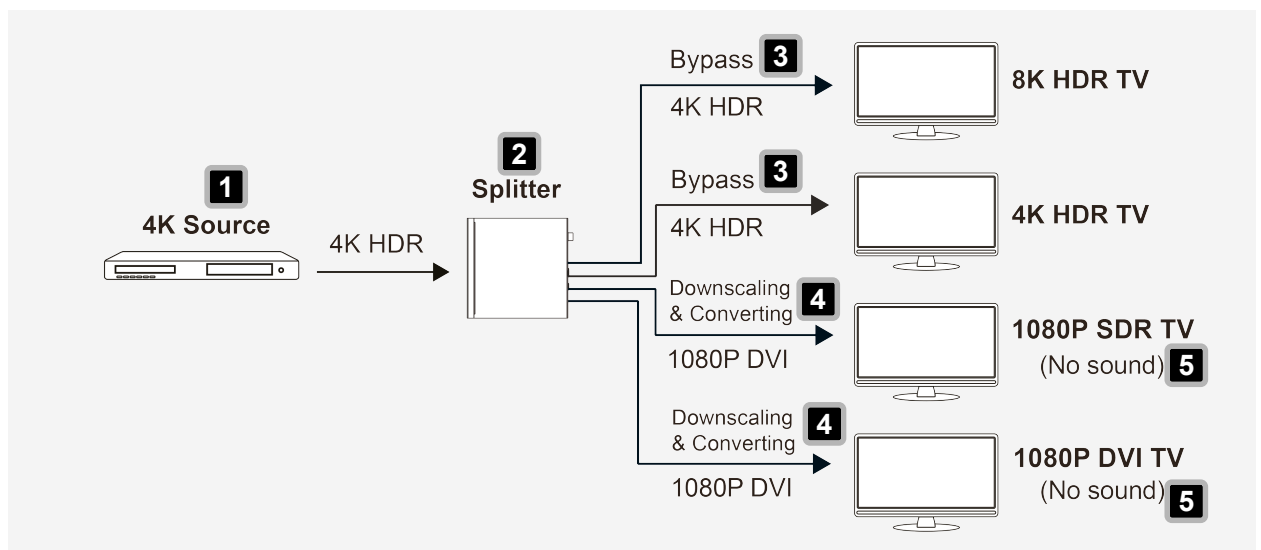
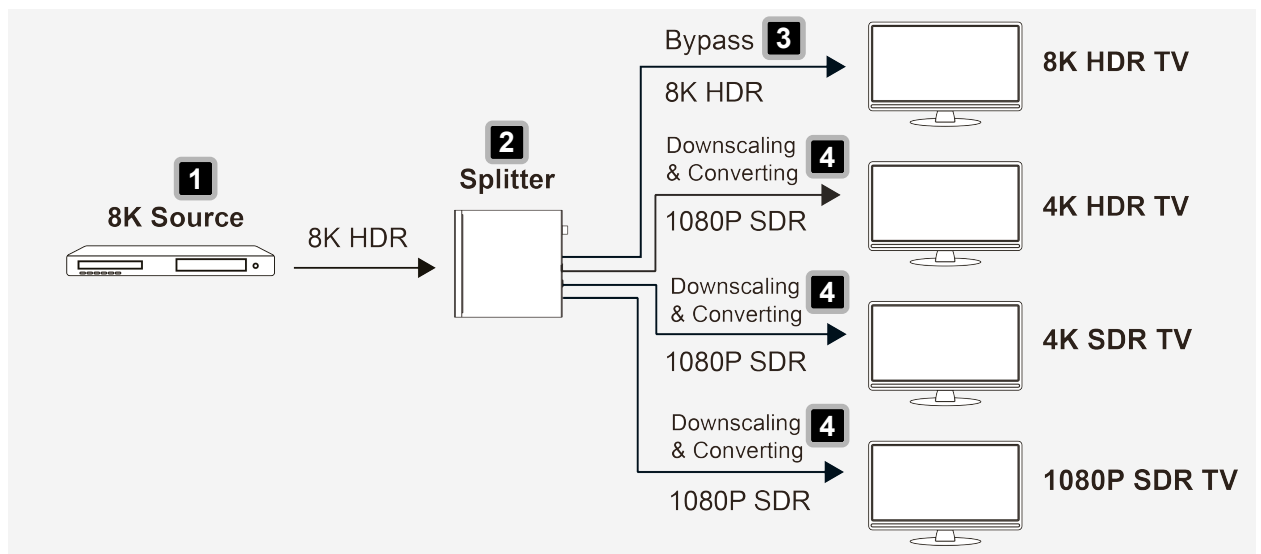
- 2 Set the DIP switches to select the predefined EDID modes
 - a) 1-1-0 = 4K60(4:4:4), 2.0CH
 - b) 1-0-1 = FRL12G_8K_HDR, 2.0CH
 - c) 1-0-0 = FRL12G_8K_HDR, 5.1CH

- d) 0-1-1 = FRL12G_8K_HDR, 7.1CH
- e) 0-1-0 = FRL10G_8K_HDR, 2.0CH
- f) 0-0-1 = FRL10G_8K_HDR, 5.1CH
- g) 0-0-0 = FRL10G_8K_HDR, 7.1CH

6.3 ABOUT DOWNSCALING AND AUTOCONVERTING

This 8K HDMI splitter automatically downscales and converts signals based on the EDID of connected display devices, selecting the minimum resolution for output.

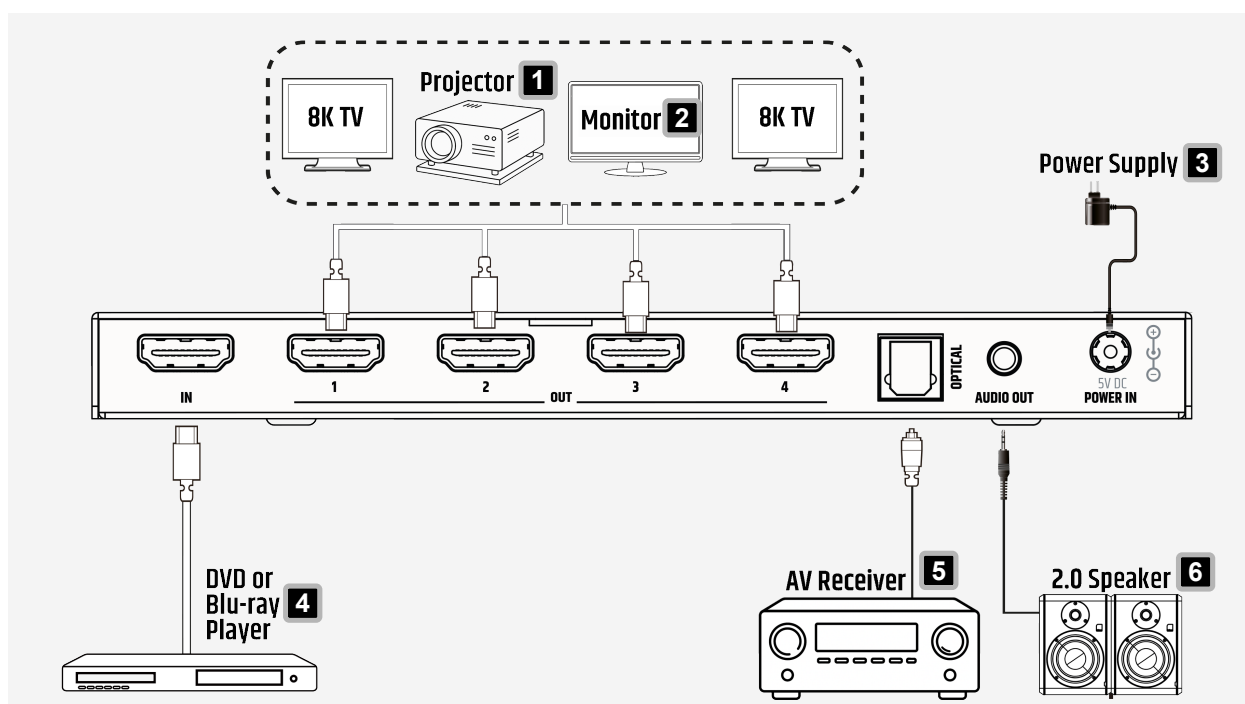
FOR EXAMPLE:



- 1** Source
- 2** Splitter
- 3** Bypass

4 Downscaling & Converting**5** (No sound)

When downscaling to 1080p in DVI mode, audio will not be transmitted to the connected display because DVI is a video-only format.

6.4**USE CASE****1** Projector**2** Monitor**3** Power Supply**4** DVD or Blu-ray Player**5** AV Receiver**6** 2.0 Speaker

7 MAINTENANCE

7.1

PRODUCT MAINTENANCE



CAUTION

Mains Voltage

Risk of electric shock

- a. Before you perform maintenance work on the device, disconnect the device from all poles.



NOTICE

Damage to the device and void of warranty

- a. Do not use cleaning agents, disinfectants, alcohol, or agents with abrasive effect for cleaning.

Carry out the maintenance measures listed below on a regular basis. The frequency of cleaning depends on the environment in which you use the product. Damp or dirty environments may cause increased soiling and wear.

VISUAL INSPECTION

Check the following points before operating the device.

- **⚠ WARNING! Risk of electric shock.** Check mains power cables for damage or material fatigue.
- Check all air inlets and outlets for damage, dust, or dirt deposits.
- Check all outside screws and covers for corrosion, damage or excessive wear.
- Check all connectors and rubber sealing caps for damage, dust, or dirt deposits.
- **⚠ WARNING! Risk of falling objects.** Check that all screws, fasteners, and rigging points are securely tightened.

CLEANING

- Clean the surface with a clean and damp lint-free cotton cloth. Wipe off all excess moisture.
- **🚫 NOTICE! Do not use compressed air.** Clean any air inlets and outlets of dust and dirt deposits with a clean and damp lint-free cotton cloth.
- Clean all plug contacts from dust and dirt with a dry lint-free cotton cloth.

8 DISPOSAL

8.1

PACKAGING DISPOSAL



1. You can feed the packaging into the reusable material cycle using the usual disposal methods.
2. Separate the packaging in accordance with the applicable disposal laws and recycling regulations in your country

8.2

DEVICE DISPOSAL



1. This device is subject to the European Directive on Waste Electrical and Electronic Equipment, as amended. WEEE Directive Waste Electrical and Electronic Equipment. Old appliances do not belong in the household waste. The old device must be disposed of via an approved disposal company or a municipal disposal facility. Observe the applicable regulations in your country.
2. Observe all disposal laws applicable in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the seller of the product or the appropriate regional authorities.
4. Retailers are often legally obliged to take back items free of charge.
5. Old appliances that contain harmful substances are labelled with the symbol of a crossed-out dustbin.
6. Current information on the collection rate can be found at the following website:
<https://environment.ec.europa.eu/>. Search for the following term: waste-electrical-and-electronic-equipment-weee.

