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U T E UH8K-2VE 8K 1x2 HDMI 2.1 Splitter with Down Scaling Audio

U T E UH8K-2VE 8K 1×2 HDMI 2.1 Splitter with Down Scaling Audio User Manual

Contents

U T E UH8K-2VE 8K 1×2 HDMI 2.1 Splitter with Down Scaling Audio

Specifications

- Model: UH8K-2VE
- Resolution: 8K60
- Ports: 1 input, 2 output
- Interface: HDMI 2.1
- Features: Down-scaling, Audio De-embedding, CEC Pass-Through

Product Introduction

The UH8K-2VE is an 8K60 1×2 HDMI 2.1 Splitter with Down-scaling, Audio De-embedding, and CEC Pass-Through capabilities. It allows you to split an HDMI signal from one source to two displays while supporting high-resolution video formats.

Features

- Down-scaling: Supports down-scaling of high-resolution content for compatibility with various displays.
- Audio De-embedding: Extracts audio signals from the HDMI input for separate audio output.
- CEC Pass-Through: Allows CEC signals to pass through for convenient control of connected devices.

Packing List

- UH8K-2VE 8K HDMI Splitter
- Power Adapter
- User Manual

Product Usage Instructions

Safety Precautions

- Read all instructions carefully before using the device.
- Avoid dismantling or modifying the device to prevent electrical shock.
- Use only supplies that meet the product's specifications to prevent damage or malfunction.
- Avoid exposure to rain or moisture; ensure proper ventilation during installation.
- Avoid twisting or pulling the optical cable ends forcefully to prevent malfunction.
- Do not use liquid or aerosol cleaners on the unit; unplug before cleaning.
- Unplug the device when not in use for an extended period.
- Seek servicing from qualified personnel if needed.

Installation
Connect the HDMI input from your video source to the UH8K-2VE splitter's input port. Then, connect two HDMI cables from the splitter's output ports to your displays. Plug in the power adapter and turn on the device.

Operation
The splitter will automatically distribute the video signal to both connected displays. Use the audio de-embedding feature if you wish to route audio separately. Control devices through CEC Pass-Through if supported by your setup.

Maintenance
Regularly check for dust accumulation and clean the device using a dry cloth. Avoid using abrasive cleaners or solvents. Ensure proper ventilation around the device for optimal performance.

FAQ

- **Q: Can I use this splitter with a 4K source?**

  A: Yes, the UH8K-2VE splitter supports down-scaling, allowing compatibility with lower resolution sources such as 4K.

- **Q: How do I switch between displays when using the splitter?**

  A: The splitter automatically duplicates the signal to both displays. There is no need for manual switching.

UH8K-2VE
8K 1×2 HDMI 2.1 Splitter with Down-scaling, Audio De-embedding and CEC Pass-Through

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Version: UH8K-2VE_2023V1.3
www.ute.de

Statement
Thanks for purchasing this product, please read this user manual carefully before using this product. Pictures are shown in this manual for reference only. Different models and specifications are subject to real product.
This manual is only for operation instruction, please contact the local dealer for maintenance assistance. The functions described in this version are updated till July, 2023. In the constant effort to improve our product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.
All product function is valid till 2023-07-15.

Trademarks

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FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.
Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.
Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

Safety Precaution

To ensure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Do not dismantle the housing or modify the module to avoid electrical shock or burn.
- Using supplies not meeting the products' specifications may cause damage, deterioration or malfunction.
- Do not expose the unit to rain, moisture or install this product near water.
- Install the device in a place with fine ventilation.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning.
- Unplug the power when not used for a long period of time.
- Refer all servicing to qualified service personnel.

Introduction

Product Introduction
Thanks for choosing the 1×2 8K HDMI 2.1 Splitter UH8K-2VE, which can distribute one HDMI input to two outputs. The splitter supports HDMI video resolution up to 8K@60Hz 4:4:4 / 4K@120Hz 4:4:4, HDR and DTS/Dolby audio formats.
Moreover UH8K-2VE supports video resolution down-scaling, the 8K/ 4K input can be automatically degraded to 4K/ 1080p output for compatibility with 1080p display.
Besides passing EDID information from the display, there are multiple built-in EDID settings can be selected by the

4-pin DIP switch on the front panel. Moreover, the UH8K-2VE supports convenient firmware upgrade through USB type-C port.

Features

- Supports HDMI V2.1, HDCP 2.3 compliant and 48Gbps.
- Supports video resolution up to 8K@60Hz 4:4:4 and 4K@120Hz 4:4:4
- HDMI input supports HDCP 2.3 and the outputs support HDCP Active or HDCP Passive mode.
- Supports video resolution down-scaling, the 8K/4K input can be automatically degraded to 4K/ 1080p output for compatibility with 1080p display.
- 48Gbps high bandwidth.
- Advanced EDID management: multiple built-in EDID and user defined settings can be selected.
- Supports ALLM (Auto Low-Latency Mode), VRR and audio de-embedding
- Supports CEC pass-through.
- Provides LEDs to indicate the current operating status.
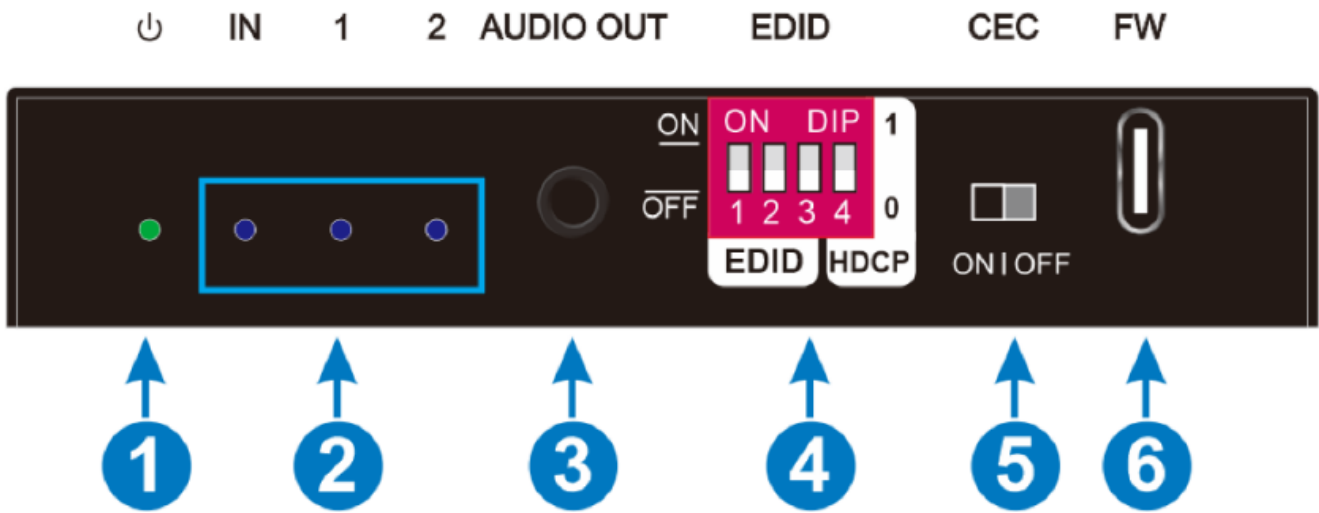- Firmware upgrade by USB-C port.

Packing List

- 1x UH8K-2VE: HDMI V2.1 1×2 Splitter with Down-scaling and audio de-embedding
- 4x Plastic Cushions
- 1x Power Adapter (12V DC 1A)
- 1x User Manual

Note: Please contact your dealer immediately if any damage or defect in the components is found.

Panel Description

Front Panel

1. POWER LED: The LED illuminates green when power is applied.
2. INPUT & OUTPUT LEDs:
   - Input LED: The LED illuminates blue when the HDMI input signal is connected and HDCP is connected, flashing when the HDMI input signal without HDCP, light off when there is no input signal.
   - Output LEDs: The LED illuminates blue when there is HDMI output signal on the corresponding channel.
3. AUDIO OUT: Output de-embedded audio from HDMI IN.
4. EDID: 4-pin DIP switch for EDID setting and HDCP mode selection.
   Please refer to 4 DIP Switch Operation for more details.
5. CEC: Used for CEC on/off.
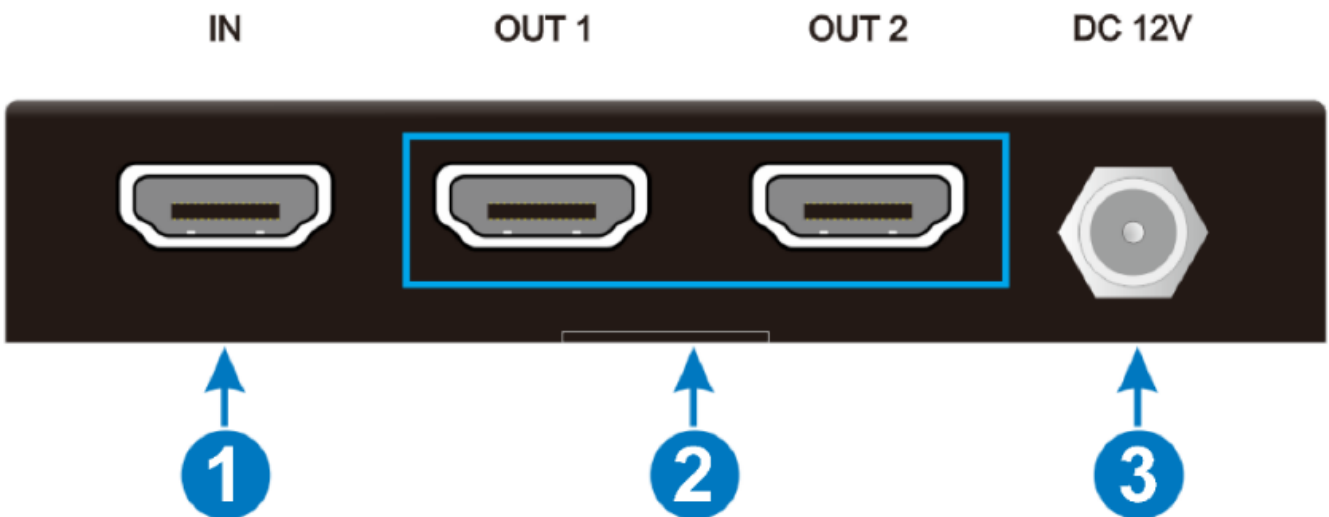6. FW: USB-C port for firmware upgrade.

Figure 2-1 UH8K-2VE Front Panel

Note: Pictures shown in this manual are for reference only, different model and specifications are subject to real product.

Rear Panel

1. **INPUT**: Type-A female HDMI input port to connect a HDMI source.
2. **OUTPUTS (**OUT1 & OUT2): Two type-A female HDMI output ports to connect HDMI displays.
3. **DC 12V**: DC barrel port to connect an AC power adapter.

Figure 2-2 UH8K-2VE Rear Panel

Note: Pictures shown in this manual are for reference only, different model and specifications are subject to real product.
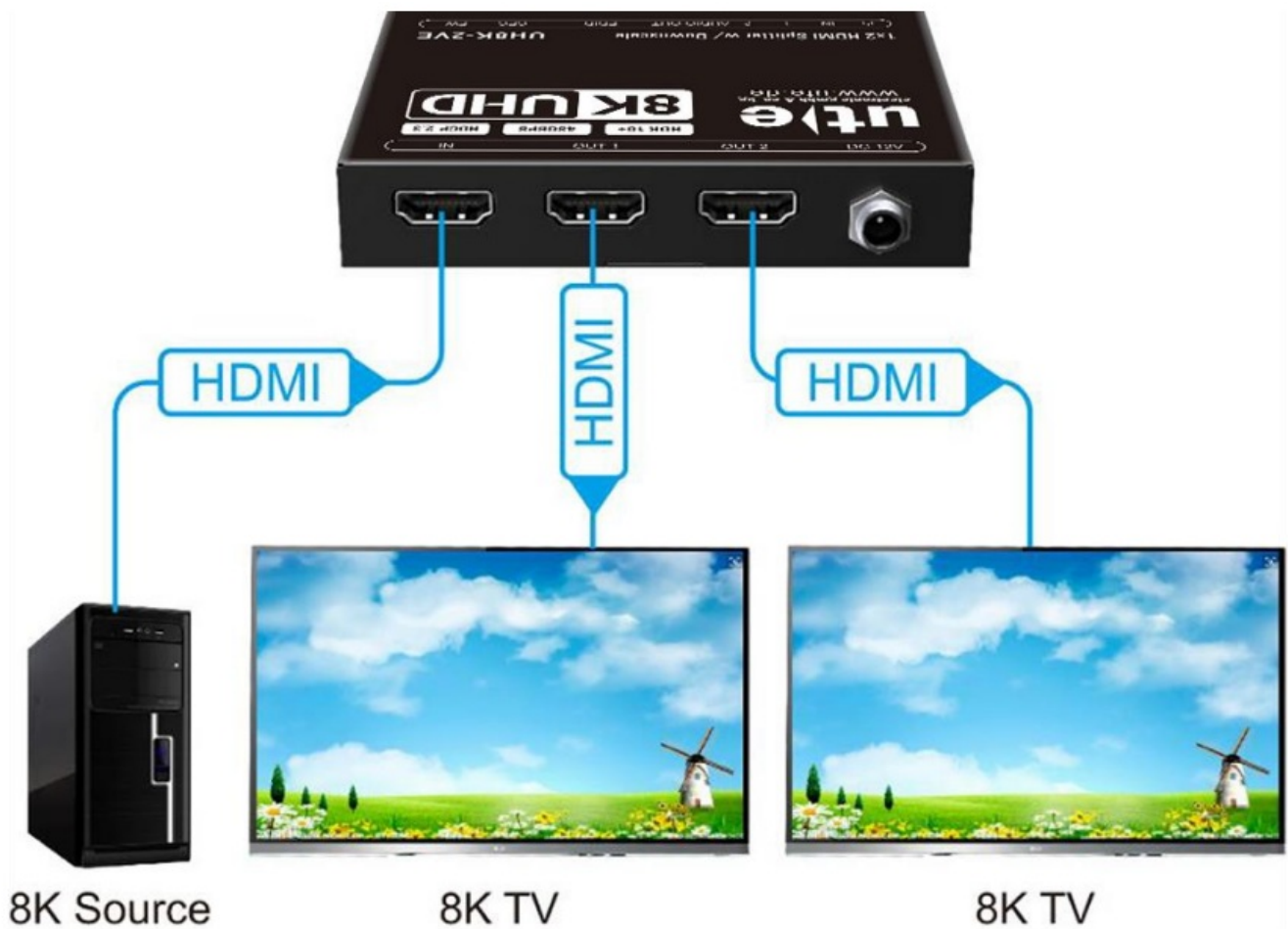
System Connection

Usage Precautions

1. Make sure all components and accessories included before installation.
2. System should be installed in a clean environment and has a prop temperature and humidity.

3. All of the power switches, plugs, sockets and power cords should be insulated and safe.

System Diagram UH8K-2VE

The following diagram illustrates the typical input and output connection that can be utilized with 8K 1×2 HDMI2.1 Splitter UH8K-2VE:

Figure 3-1 Connection and System Diagram

Note: When connecting, there may be over edge problems. At this time, you need to set over scanning in the graphics card settings.
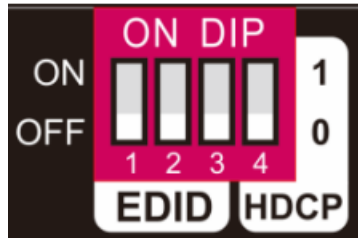
DIP Switch Operation

EDID Management

The Extended Display Identification Data (EDID) is used by the source device to match its video resolution with the connected display.
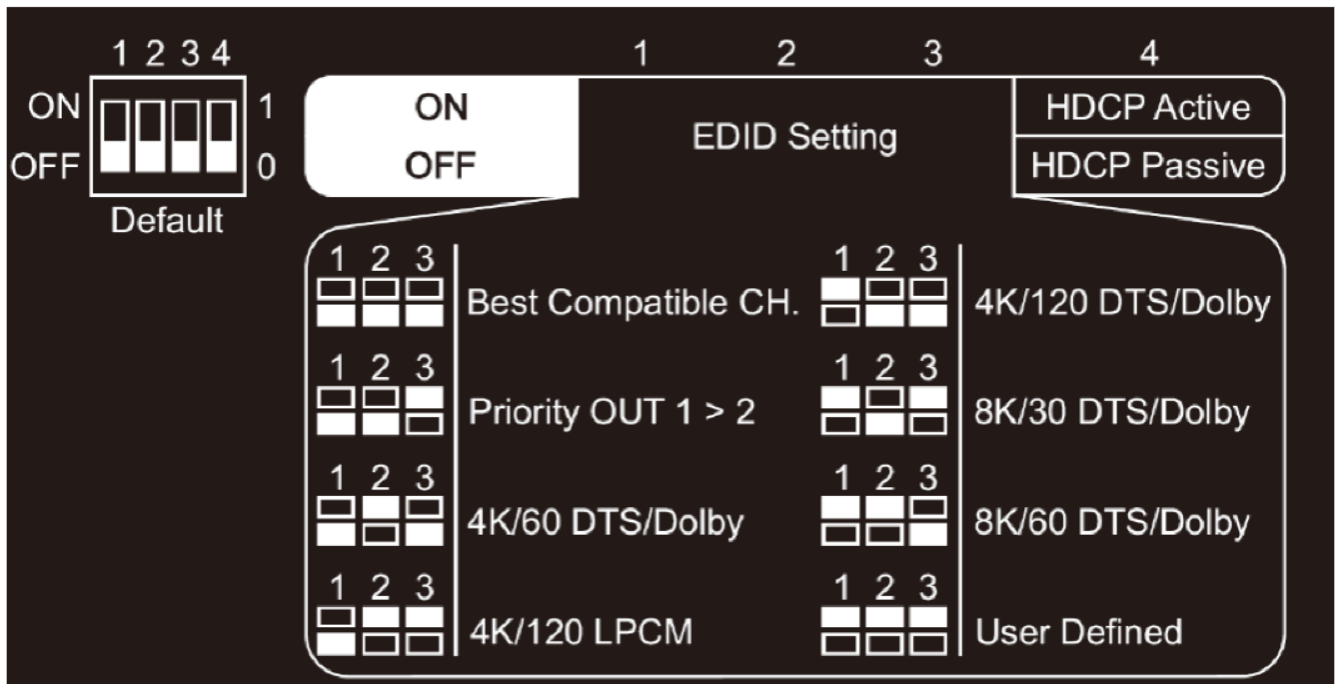
By default, the source device obtains its EDID from the first connected display.

Meanwhile, since the displays with different capabilities are connected to the splitter, the DIP switch on the front panel can be used to set the EDID to a fixed value to ensure the compatibility in video resolution.

The switch represents "0" when in the lower (OFF) position, and it represents "1" while putting the switch in the upper (ON) position.

Switch 1~3 are used for EDID setting. The DIP switch status and its corresponding setting are shown at the back of the product.

Figure 4-1 EDID cart at the back of UH8K-2VE

DIP switch settings (EDID)

Switch 1~3 are used for EDID setting.

The switch represents "0" when in the lower (OFF) position, and it represents "1" while putting the switch in the upper (ON) position.

Switch Status	Video Resolution	Audio Format
000	Obtain the EDID of output 1-2, then compare EDIDs and output the highest level of video resolution and the lowest color space. Example: If there is 4:4:4 and 4:2:0 color space, it will retain the 4:2:0 after compare procession, and if there is 8K, 4K and 1080P, the machine will output the 8K resolution. Note: The output EDID supports up to 8K@60 4:2:0	
001	Priority the EDID of output 1.	
010	4K@60Hz 4:4:4 HDR	DTS/Dolby
011	4K@120Hz 4:2:0 HDR	LPCM
100	4K@120Hz 4:4:4 HDR	DTS/Dolby
101	8K@30Hz 4:4:4 HDR	DTS/Dolby
110	8K@60Hz 4:4:4 HDR	DTS/Dolby
111	User Defined	

EDID Upgrade

1. Connect the FW port on the front panel of the machine to be tested to the computer with a USB Type-A to Type-C cable, and power on the machine to be tested;
2. Open the serial port tool on the computer, select the correct serial port number and baud rate 115200;
3. Send the command > EDIDUpgrade first, and then select the EDID file to be uploaded
   Please refer to 5 RS23 Commands for more details.
4. Click Upload. When you receive a successful feedback, it means that the EDID has been uploaded successfully. Otherwise, please repeat the above steps.

HDCP Mode/ Management
Put switch 4 on "ON" position to select HDCP Active mode, or to "OFF" for HDCP Passive mode.

Switch Status	Mode	HDCP
OFF (0)	Passive (Default)	Automatically follows the input's HDCP version.
ON (1)	Active	The input supports up to HDCP 1.4, and the output HDCP follows the input.

RS232 Commands

Baud Rate: 115200 Data bit: 8 Stop bit: 1 Parity bit: none

Command	Description	Feedback
>EDIDUpgrade	Upload user defined EDID	<Please Upload the EDID File Through RS232 In 10s … <Save Failed, The EDID File Was Not Uploaded Within 10s. <Saved Successfully, User EDID Is Ready.
>Reset	Factory reset	<Factory Reset
>Reboot	Restart the machine	<Reboot

Note: The commands need to be ended with <CR><LF>

Firmware Upgrade

Please follow the below steps to upgrade firmware by the USB-C port:

- **Step1.** Connect the FW port on the front panel of the machine to the computer with a USB Type-A to Type-C cable, and power on the machine;
- **Step2.** Open the stm32_upgrade.exe upgrade tool on the computer, select the correct serial port number and baud rate 115200;
- **Step3.** Click the Open button first, and then click the Connect button. The Connect button turns green to indicate that it is connected, and the button turns to red to indicate that the connection is not successful;
- **Step4.** Click the OpenFile button to load the application layer corresponding to the machine, and click the Upgrade button to start the upgrade.

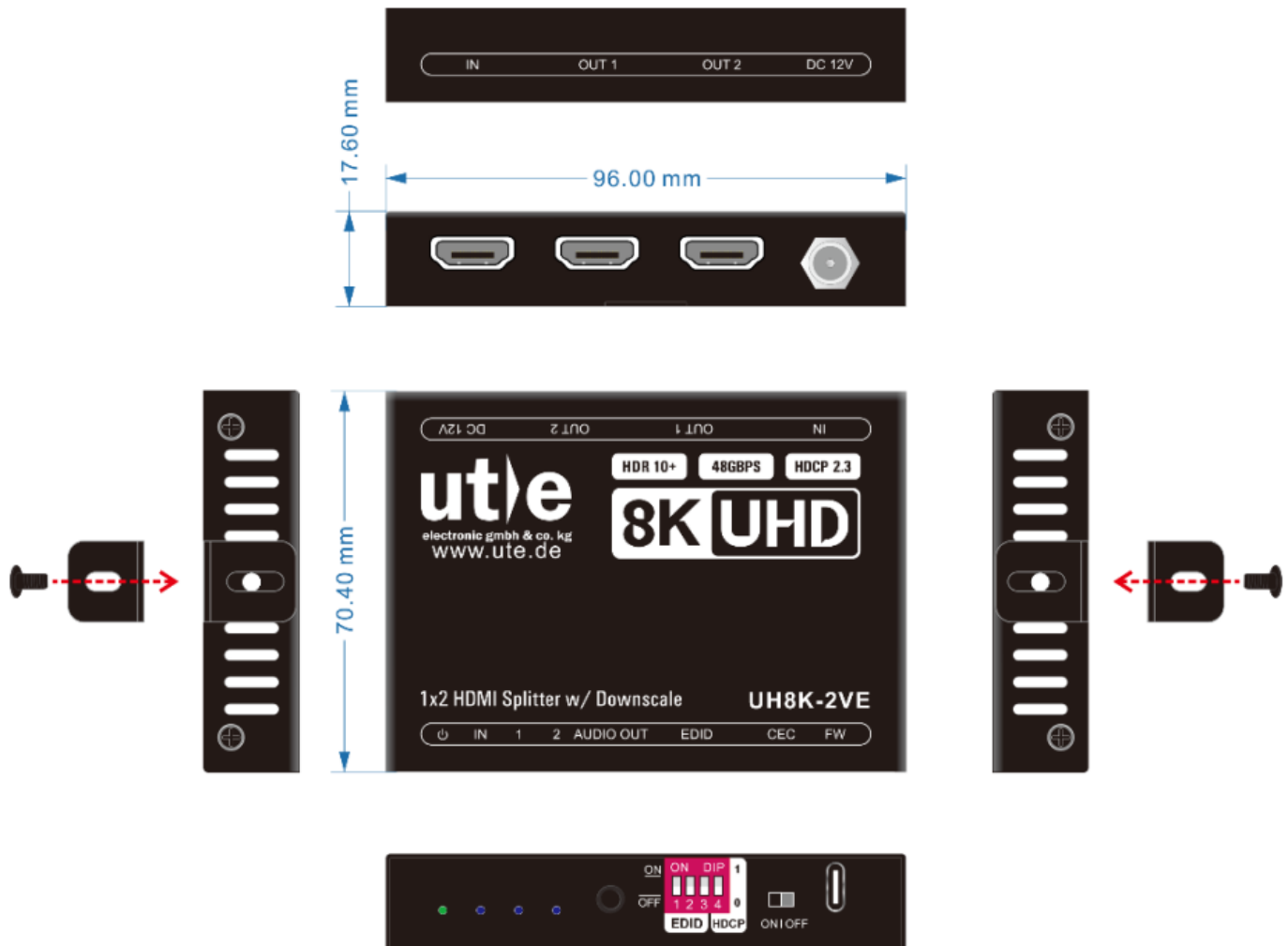**Note:** 08009000 must be added after the software name to be recognized by this software.

Technical Specification

Video Input	
Input	(1) HDMI
Input Connector	(1) Type-A female HDMI
HDMI Input Resolution	Up to 8K@60Hz 4:4:4 8bit
HDMI Standard	2.1
HDCP Version	2.3, 2.2, 1.4 compliant
HDR	Supported
CEC	Supported
Video Output	
Output	(2) HDMI
Output Connector	(2) Type-A female HDMI
HDMI Output Resolution	Up to 8K@60Hz 4:4:4 8bit
HDMI Standard	2.1
HDCP Version	2.3, 2.2, 1.4 compliant
HDR	Supported
CEC	Supported
Control	
Control Part	(1) EDID 4-pin DIP switch, (1) USB Type-C port

General	
Bandwidth	48Gbps
HDMI V2.1 Cable Length	8K@60Hz 4:4:4 ≤ 3m, 4K@60Hz 4:4:4 ≤ 5m, 4K@60Hz 4:2:0 ≤ 10m, 1080p ≤ 15m
Operation Temperature	-5 to +55°C (+23° to +131°F)
Storage Temperature	-25 to +70°C (-13° to +158°F)
Relative Humidity	10% to 90%, non-condensing
Power Supply	Input:100V~240V AC; Output: 12V DC 1A
Power Consumption	4W (max)
Dimension (W*H*D)	96mm x 17,6mm x 70,4mm
Net Weight	155g

Note: Please adopt high-qualified HDMI cable fully compliant with HDMI 2.1 for reliable transmission and connection.

Panel Drawing

After-sales / Customer Service

Any transport costs are borne by the users during the warranty.
The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter.
There terms and conditions may be changed without prior notice.

1. Product Limited Warranty: We warrants that its products will be free from defects in materials and workmanship for two years, which starts from the first day you buy this product (The purchase invoice shall prevail).
Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service.

2. Scope
These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized dealer only.

3. What the warranty does not cover (Warranty Exclusion)
   - Warranty expiration.
     - Factory applied serial number has been altered or removed from the product.
     - Damage, deterioration or malfunction caused by:
     - Normal wear and tear.
     - Use of supplies or parts not meeting our specifications.
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.

- Damage caused by force majeure.
- Servicing not authorized by distributor.
- Any other causes which does not relate to a product defect.
    - Shipping fees, installation or labor charges for installation or setup of the product.
4. Documentation: Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of dealer.
5. Technical Support: Email to our after-sales department or make a call, please inform us the following information about your cases.
    - Product version and name.
    - Detailed failure situations.
    - The formation of the cases.

Remarks: For any questions or problems, please try to get help from your local dealer or our customer support (**info@ute.de**).

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Documents / Resources

U T E UH8K-2VE 8K 1x2 HDMI 2.1 Splitter with Down Scaling Audio [pdf] User Manual
UH8K-2VE 8K 1x2 HDMI 2.1 Splitter with Down Scaling Audio, UH8K-2VE, 8K 1x2 HDMI 2.1 Splitter with Down Scaling Audio, 2.1 Splitter with Down Scaling Audio, Splitter with Down Scaling Audio, Down Scaling Audio

References

- ▶ **U.T.E. electronic | Pro AV- & IT-Großhandel – seit 1989**
- **User Manual**