

USER MANUAL

AVG-UDA4 DA

Distribution Amplifier 4K HDMI
1x4 with Audio Breakout

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Version: UDA4_DA_2018V1.0

Features

- Four simultaneous HDMI outputs
- Supports resolution up to 4Kx2K@60Hz 4:4:4
- Fully compliant with HDMI2.0 & HDCP2.2.
- Transmits 4Kx2K HDMI up to 10m
- High bandwidth: 18Gbps
- 3.5mm mini jack and a 3-pin Phoenix plug for audio de-embedding.
- Features smart EDID management. Multiple presets and customised settings allowed.
- Supports two-way CEC control.
- Supports Hot plugging.
- Easy firmware update



The AVG-UDA4 DA is a 4K HDMI splitter with the ability to transmit an HDMI or DVI source to four displays simultaneously. Compliant with HDMI2.0 & HDCP2.2, the AVG-UDA4 DA provides comprehensive resolution capabilities up to 4K, 1080p & 3D. It will also de-embed digital stereo audio to two analogue audio outputs.

**PLEASE READ THIS PRODUCT MANUAL CAREFULLY
BEFORE USING THIS PRODUCT.**

This manual is only for operation instruction only, and not to be used in a maintenance capacity. The functions described in this version are current as at April 2018. Any changes of functions and operational parameters will be updated in future manual versions. Please refer to your dealer for the latest product details.

Version 1.0 10/4/18

SAFETY OPERATION GUIDE



In order to guarantee the reliable operation of the equipment and safety of the user, please abide by the following procedures in installation, use and maintenance:

1. The system must be earthed properly. Please do not use two blade plugs and ensure the AC power supply ranges from 100v to 240v and from 50Hz to 60Hz.
2. Do not install the switcher in an environment where it will be exposed to extreme hot or cold temperatures.
3. This unit will generate heat during operation, please ensure that you allow adequate ventilation to ensure reliable operation.
4. Please disconnect the unit from mains power if it will be left unused for a long time.
5. Please **DO NOT** try to open the casing of the equipment, **DO NOT** attempt to repair the unit. Opening the unit will void the warranty. There are high voltage components in the unit and attempting to repair the unit could result in serious injury.
6. Do not allow the unit to come into contact with any liquid as that could result in personal injury and product failure.

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1. Introduction

1.1. Introduction to the AVG-UDA4 DA

The AVG-UDA4 DA is a 4K HDMI splitter with the ability to transmit an HDMI or DVI source to four displays simultaneously. Compliant with HDMI2.0 & HDCP2.2, the AVG-UDA4 DA provides comprehensive resolution capacities up to 4K, 1080p & 3D. It will also de-embed digital stereo audio to the two analogue audio outputs. Two-way CEC is designed to control source devices and displays by using only one of the IR remotes.

The AVG-UDA4 DA's firmware can be easily updated via its USB port.

1.2. Features

- Four simultaneous HDMI outputs
- Supports resolution up to 4Kx2K@60Hz 4:4:4
- Fully compliant with HDMI2.0 & HDCP2.2.
- Transmits 4Kx2K HDMI up to 10m
- High bandwidth: 18Gbps
- 3.5mm mini jack and a 3-pin Phoenix plug for audio de-embedding.
- Features smart EDID management. Multiple presets and customised settings allowed.
- Supports two-way CEC control.
- Supports Hot plugging.
- Provides four LED indicators to show the current operating state and to assist in troubleshooting an installation.
- Easy firmware update via the Micro-USB port.

2. What's in the Box

- 1 x AVG-UDA4 DA HDMI2.0 1 x 2 Splitter
- 2 x Mounting ears with 4 x Screws
- 4 x Rubber feet
- 1 x 3 pin Phoenix plug
- 1 x Power Adapter (DC 5V 2A)
- 1 x User Manual

Note: Please confirm if the product and all accessories are all included, if not, please contact your dealer.

3. Product Appearance

Front Panel



- ① **Power LED:** The LED illuminates green when power is applied.
- ② **INPUT LED:** The LED illuminates green when there is an input signal present.
- ③ **OUT 1~OUT 4 LED:** The LED illuminates green when there is HDMI output on the corresponding channel.

Rear Panel



- ① **IN:** Type A female HDMI input port to connect HDMI source.
- ② **OUT 1 ~ OUT 4:** Four Type A female HDMI output port to connect HDMI displays.
- ③ **AUDIO OUT:** 3.5mm mini jack and 3-pin phoenix connector for analog audio output.
- ④ **EDID:** 4-pin DIP switch for EDID setting.
- ⑤ Pinhole button for EDID setting.
- ⑥ Micro-USB port for firmware upgrade.
- ⑦ **DC 5V:** DC barrel port to connect a 5 VDC AC power adapter.

Notes:

- a) Pictures shown in this manual are for reference only, different models may vary slightly.
- b) The Output HDCP compliant status depends on the input signal. When the input signal includes HDCP, then output signal includes HDCP and vice versa.
- c) HDMI signal contains both HDMI video signal and embedded audio signal (PCM, Dolby Digital, DTS, DTS-HD), while the DVI signal contains only a video signal.
- d) The AVG-UDA2 DA can switch input signal formats per the displays.
For example, when the input signal is HDMI and the display can only support a DVI signal, the AVG-UDA2 DA will change the signal to the DVI format.
- e) EDID Management: automatically manages the output signal (e.g. output resolution) to fit all displays.

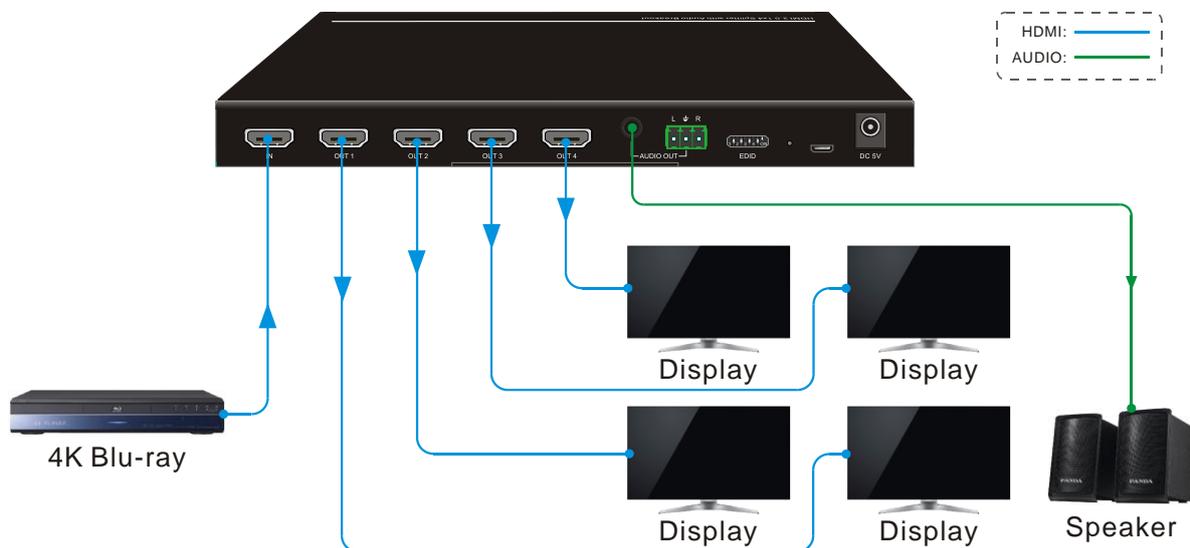
4. System Connection

4.1 Usage Precautions

- System should be installed in a clean environment with temperature and humidity maintained to within equipment specification.
- All of the power switches, plugs, sockets and power cords should be insulated and safe.
- All devices should be connected before power on.

4.2. Connection Diagram

The following diagram illustrates typical input and output connections that can be utilised with the AVG-UDA4 DA.



4.3 Connection Procedure

- Step 1.** Connect an HDMI/ DVI source device (e.g. Blu-ray DVD) to the **HDMI INPUT** socket of AVG-UDA4 DA with a HDMI cable.
- Step 2.** Connect the HDMI displays to the **HDMI OUTPUT** sockets of AVG-UDA4 DA with HDMI cables.
- Step 3.** Plug a DC 5V power adapter to the power port of AVG-UDA4 DA.

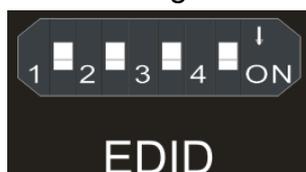
Note: All the ports support hot-plugging. It's important to know that hot plugging a display may result in a splash screen at the output end.

4.4 EDID Management

The Extended Display Identification Data (EDID) is used by the source device to match its video resolution with the connected display.

- **Predefined EDID settings**

The 4-pin DIP switch on the rear panel can be used to set the EDID to a fixed value. Use the following table to determine the settings for the 4-pin DIP switch for specific video resolution and audio capabilities. When in the lower (ON) position, each switch represents “1”, it represents “0” when setting the switch in the upper position.



Switch Status	Video Resolution	Audio Format
0000	1920x1080p@60Hz 4:4:4 RGB 8bit (Factory default)	Stereo
0001	1920x1080p@60Hz 4:4:4 RGB 8bit	High Definition
0010	1920x1080p@60Hz 4:4:4 RGB 12bit	Stereo
0011	1920x1080p@60Hz 4:4:4 RGB 12bit	High Definition
0100	3840x2160p@60Hz 4:2:0 RGB 12bit	Stereo
0101	3840x2160p@60Hz 4:2:0 RGB 12bit	High Definition
0110	3840x2160p@60Hz 4:4:4 RGB 12bit HDR	Stereo
0111	3840x2160p@60Hz 4:4:4 RGB 12bit HDR	High Definition
1000	1280x800p@60Hz 4:4:4 RGB 8bit	Stereo
1001	1920x1200p@60Hz 4:4:4 RGB 8bit	Stereo
1010	2560x1600p@60Hz 4:4:4 RGB 8bit	Stereo
1011	1280x720p@60Hz DVI	No audio
1100	1920x1080p@60Hz DVI	No audio
1101	3840x2160p@60Hz DVI	No audio

- **EDID data transfer**

Please follow the procedure below to allow the source device to obtain its EDID data from the display which is connected to the **OUT 1** port:

- 1) Set the 4-pin DIP switch to status “1110”.
- 2) Connect the source device to **IN** port, and connect the display to the **OUT 1** port.
- 3) Long-press the pinhole switch for at least five seconds on the rear panel until the input LED blinks to indicate the splitter has entered EDID copy mode.
- 4) Once you have successfully copied the EDID data from the **OUT 1** port to the input source, the input LED will blink three times. If that fails, the copy process will retry 5 times. If it still fails, the input LED will go out and the source device will still save the previous EDID data.

4.5 Application

Robust performance for signal transmission makes the AVG-UDA4 DA ideal in the custom installation industry, IT computer space, signal monitoring, big screen displays, conference systems, television broadcast, education, banking and security institutions etc.

4.6 Firmware Upgrade

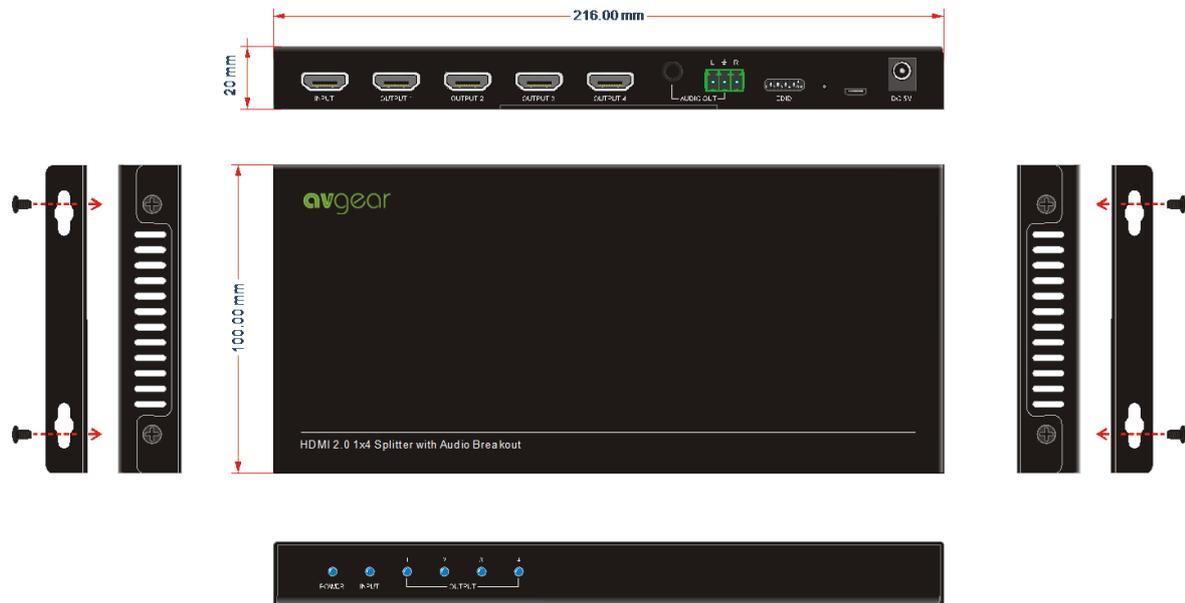
Please follow the steps as below to update the firmware using Micro-USB port on the rear panel:

- 1) Connect the AVG-UDADA to your PC by USB cable, and then power on the splitter. The PC will automatically detect a U-disk named of "BOOTDISK".
- 2) Double-click the U-disk, a file named of "READY.TXT" would be showed.
- 3) Directly copy the latest upgrade file (.bin) to the "BOOTDISK" U-disk.
- 4) Reopen the U-disk to check the filename "READY.TXT" whether it automatically becomes "SUCCESS.TXT", if yes, the firmware was updated successfully. If not, the firmware update failed, the name of upgrade file (.bin) needs to be checked again, then repeat the above steps.
- 5) Remove the USB cable after a firmware update.

5. Specifications

Video Input	
Input	(1) HDMI
Input Connector	(1) Female type A HDMI
HDMI Input Resolution	Up to 4Kx2K@60Hz 4:4:4
HDMI Standard	2.0
HDCP Version	2.2
Video Output	
Output	(4) HDMI
Output Connector	(4) Female type A HDMI
HDMI Output Resolution	Up to 4Kx2K@60Hz 4:4:4
HDMI Standard	2.0
Audio	
Output	(2) Audio outputs
Output Connector	(1) 3.5mm mini stereo audio jack (1) 3-pin Phoenix connector
Audio Format	PCM
Audio Output Impedance	70 Ohms
Frequency Response	20Hz to 20kHz, ± 3 dB
General	
Bandwidth	18Gbps
Operation Temperature	-10 ~ +55°C
Storage Temperature	-25~ +70°C
Relative Humidity	10%-90%
Power Supply	Input:100V~240V AC; Output: 5V DC 2A
Power Consumption	7W(Max)
Dimension (W*H*D)	216mm x 20mm x 100mm
Net Weight	280g

6. Panel Drawing



7. Troubleshooting & Maintenance

Problems	Causes	Solutions
Color loss or no video signal output	The Connection of the cabling may be incorrect or faulty	Check whether the cables are connected correctly and in working condition.
	Failed or loose connection	Make sure the connection is secure
No Video output when switching	No signal at the input / output end	Check with oscilloscope or multimeter if there is any signal at the input/ output end.
	Failed or loose connection	Make sure the connection is good
	The display doesn't support the input resolution.	Switch to another input source or enable the display to learn the EDID data of the input.
	Failed or loose power connection	Check whether the cables are connected correctly
Power Indicator remains off when powered on	Faulty HDMI Cable	Replace with another HDMI cable which is in good working condition.
EDID management does not work normally There is a blank screen on the display when switching	The display does not support the resolution of the video source.	Switch again.
		Manage the EDID data manually to make the resolution of the video source automatically compliant with the output resolution.
	Wrong connection	Check the connection between the control device and the unit
Static becomes stronger when connecting the video connectors	Poor grounding or the device has a previous fault	Check the grounding and make sure it is connected securely