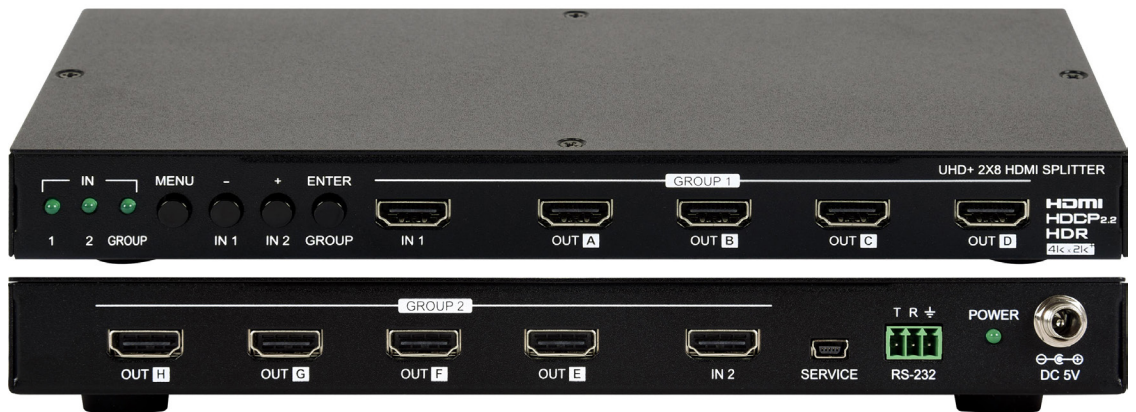# ANI-28UHDDA

4K UHD+ 2x8 HDMI Splitter

A▸NEUVIDEO®

AUDIO / VIDEO MANUFACTURER

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.

2. Follow all instructions printed on unit chassis for proper operation.

3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.

4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.

5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.

6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.

8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.

9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.

10. Turn power off and disconnect unit from AC current before making connections.

11. Never hold a power switch in the "ON" position.

12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.

13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.

14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.

15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.

16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.

17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.

18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.

19. Service Information Equipment should be serviced by qualified service personnel when:

    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain.
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
    E. The equipment has been dropped, or the enclosure damaged.

▶ CONTENTS

DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTRODUCTION

The ANI-28UHDDA 4K UHD Switching Splitter with HDCP 2.2 is an advanced solution providing high performance audio and video support including HDR and other features defined by the HDMI 2.0a specification. 4K UHD HDMI video sources, up to and including 4K@60Hz (4:4:4, 8-bit) as well as 10/12-bit sources with HDR, are able to be passed along to the (8) outputs. Pass-through of multiple digital audio formats such as LPCM 7.1, Bitstream and advanced HD Bitstream with audio sampling rates up to 192kHz are also supported. An independent HDCP management engine for each output ensures stable HDCP performance.

This splitter also includes a special *"Group Mode"* which allows the unit to function as two independent 1x4 splitters. When Group Mode is enabled, each of the (2) HDMI inputs are routed to their own discrete set of (4) outputs.

When a mixture of displays with different specifications are connected, each output can be configured to scale 4K to 1080p or apply color space conversion (4:4:4 to 4:2:0), as appropriate. Support for the CEC *"active source"* command to periodically reset input selection on CEC-compatible connected displays is also included. This unit provides an intuitive set of front panel controls with an OSD as well as RS-232 control options. These products have a 3 year warranty.

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- ANI-28UHDDA HDMI Splitter
- 5V/3A DC Power Adapter
- Terminal Block (3-Pin) to RS-232 (9-Pin D-Sub) Cable
- Users Guide

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

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FEATURES

- HDMI with HDR, 3D & 4K@60Hz support, DVI 1.0 compatible
- HDCP 2.2 and HDCP 1.0 compliant
- Supports up to 4K UHD (18Gbps, 4K@50/60Hz 4:4:4, 8-bit) video signals
- (8) output HDMI splitter with (2) selectable inputs and automatic input switching support
- Special *"Group Mode"* allows the unit to function as two independent 1x4 splitters in a single box
- Supports current 10-bit and 12-bit HDR (High Dynamic Range) formats
- Supports pass-through of LPCM 7.1, Bitstream and advanced HD Bitstream audio formats
- Per-output, selectable, 4K to 1080p down-scaling/color space conversion (4:4:4 to 4:2:0)
- Independent HDCP management engine for each output ensures stable performance
- Supports eight internal EDIDs, eight external EDIDs copied from connected devices, and two user provided EDIDs
- Support for the CEC *"active source"* command to periodically reset input selection on CEC-compatible connected displays
- Controllable via front-panel buttons with OSD and RS-232

SPECIFICATIONS

- **HDMI Bandwidth:** 600MHz/18Gbps
- **Input Ports:** (2) HDMI
- **Output Ports:** (8) HDMI
- **Control Interfaces:** RS-232 [3-Pin Terminal Block] & USB [Mini-B]
- **HDMI Cable Distance:**
    - ~16 ft/5M, 4K@60Hz (YUV 4:4:4, 8-bit)
    - ~32 ft/10M, 1080p@60Hz (12-bit)
    - ~49 ft/15M, 1080p@60Hz (8-bit)
- **Power Supply:** 5V/3A DC (US/EU Standards, CE/FCC/UL Certified)
- **CAT Cable Distance:** ~985ft/300M
- **Power Supply:** 12VDC/1.25A (US/EU standards, CE/FCC/UL certified)
- **ESD Protection: Human Body Model:**
    - ±8kV (Air Discharge)
    - ±4kV (Contact Discharge)
- **Dimensions (WxDxH):** 9.4 x 1 x 4 in (240x24x103mm)
- **Weight:** 1.4 lb/ 616g each
- **Chassis Material:** Metal
- **Silkscreen Color:** Black
- **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 (no condensation)
- **Power Consumption:** 9.57W

As product improvements are continuous, specifications are subject to change without notice.

## APPLICATIONS

- Classroom and Lecture Hall Presentations
- Showrooms and Demo Rooms
- Hotel Lobby information Displays
- Public Commercial Displays

SYSTEM REQUIREMENTS

- HDMI source equipment such as media players, video game consoles or set-top boxes.
- HDMI receiving equipment such as HDTVs, monitors or audio amplifiers.
- The use of "Premium High Speed HDMI" cables is highly recommended.

FRONT PANEL
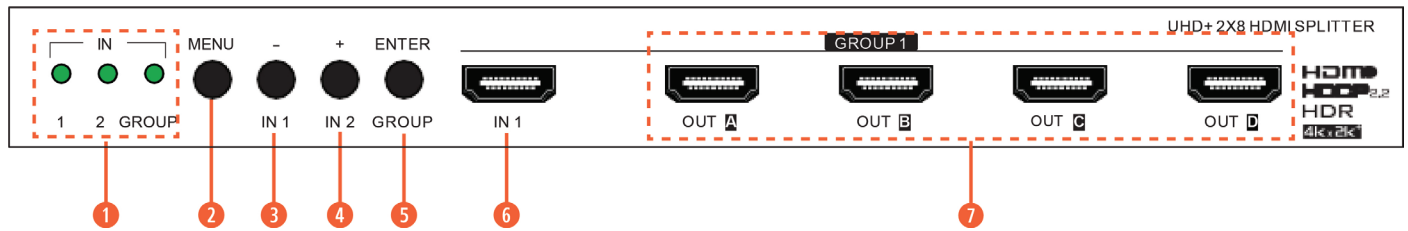
❶ IN LEDS: The behavior of these LEDs depend on if Group Mode has been enabled or not.

    A. GROUP MODE OFF

    IN 1~2: The illuminated LED indicates which source is currently selected.

    GROUP: This LED will remain off.

    B. GROUP MODE ON

    IN 1~2: These LEDs will illuminate to indicate that a live source has been detected on the associated input port. If no source is detected the LED will remain off.

    GROUP: This LED will illuminate.

    NOTE: When the front panel is locked, all 3 LEDs will blink after any button press.

❷ MENU: Press to enter the OSD menu, or to back out from menu items.

*NOTE: Press and hold the "**MENU**" button for 3 seconds while connecting the power supply to reset all settings to the factory defaults.*

❸ − & IN 1: Press to move down or adjust selections within OSD menus. When not in the OSD menu, press this button to switch to Input 1.

*NOTE: Pressing "**MENU**" and "**−**" together will force Input 1 to use the Internal "**FHD, 2CH**" EDID.*

❹ + & IN 2: Press to move up or adjust selections within OSD menus. When not in the OSD menu, press this button to switch to Input 2.

*NOTE: Pressing "**MENU**" and "**+**" together will force Input 2 to use the Internal "**FHD, 2CH**" EDID.*

❺ ENTER & GROUP: Press to confirm a selection within the OSD or to go deeper into a menu item. When not in the OSD menu, press this button to toggle Group Mode on and off.
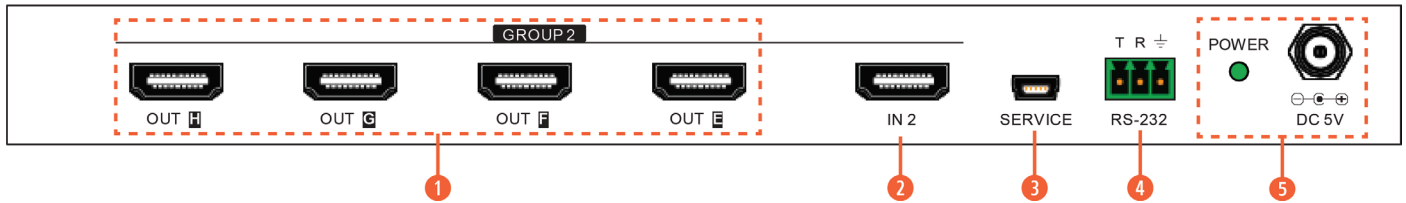
*NOTE: Press and hold the "**MENU**" and "**ENTER**" buttons together for 3 seconds to lock or unlock the front panel.*

❻ IN 1: Connect to HDMI source equipment such as a media player, game console or set-top box.

❼ OUT A~D: Connect to HDMI TVs, monitors or amplifiers for digital video and audio output.

NOTE: When Group Mode is active, these outputs will display Input 1.

BACK PANEL

❶ **OUT E~H:** Connect to HDMI TVs, monitors or amplifiers for digital video and audio output.

   NOTE: When Group Mode is active, these outputs will display Input 2.

❷ **IN 2:** Connect to HDMI source equipment such as a media player, game console or set-top box.

❸ **SERVICE:** This port is reserved for firmware update use only.

❹ **RS-232:** Connect directly to a PC, laptop or other serial control device with a 3-pin adapter cable to send RS-232 commands to control the unit.

❺ **POWER LED & DC 5V:** Plug the 5V DC power adapter into this port and connect it to an AC wall outlet for power. The LED will illuminate to indicate the unit is on and receiving power.

OSD MENU

All primary functions of this unit can be controlled by using the OSD (On Screen Display) which is activated by pressing the **MENU** button on the front of the unit. Use the **+** (PLUS), **–** (MINUS), and **ENTER** buttons to navigate the OSD menu. Press the **MENU** button to back out from any menu item and then press it again to close the menu.

MAIN MENU
INPUT SWITCH
INPUT INFORMATION
OUTPUT 4K CONVERTER
OUTPUT INFORMATION
EDID CONTROL
HDCP CONTROL
CEC CONTROL
REMOTE CONTROL
OSD SETTING
SYSTEM SETTING

The individual functions of the OSD will be introduced in the following section. Items marked in **BOLD** are the factory default settings.

INPUT SWITCH

MAIN MENU	LEVEL 2	LEVEL 3
INPUT SWITCH	SWITCH TO	**INPUT 1**
		INPUT 2
	AUTO SWITCH	ON
		OFF
	GROUP MODE	ON
		OFF

❶ **SWITCH TO:** Select the input to display when Group Mode is disabled. Note: Selecting an Input when Group Mode is turned on will disable Group Mode.

❷ **AUTO SWITCH:** Enable or disable the auto switch function.
NOTE: Auto Switch only works when Group Mode is disabled.

❸ **GROUP MODE:** Enable or disable Group Mode.

INPUT INFORMATION

MAIN MENU	LEVEL 2	LEVEL 3
INPUT INFORMATION	IN1~2	[DETAILED SOURCE INFORMATION]
	NAME	
	FMT	
	RESO	
	FREQ	
	DEPTH	
	COLOR	
	HDCP	
	AUDIO	
	HDR	

❶ **IN1~2:** Show the current input's vendor name based on the source's info-frame data.
NOTE: Not all devices will provide this information.

❷ **NAME:** Show the current input's product name based on the source's info-frame data.
NOTE: Not all devices will provide this information.

❸ **FMT:** Show the video format of the current input.

❹ **RESO:** Show the resolution and frame-rate of the current input.

❺ **FREQ:** Show the signal frequency of the current input.

❻ **DEPTH:** Show the color bit-depth of the current input.

❼ **COLOR:** Show the color space of the current input.

❽ **HDCP:** Show the HDCP status of the current input.

❾ **AUDIO:** Show the audio format of the current input.

❿ **HDR:** Show the HDR status of the current input.

OUTPUT 4K CONVERTER

MAIN MENU	LEVEL 2	LEVEL 3
OUTPUT 4K CONVERTER	ALL	BYPASS
		TO YUV420
		TO 1080P
		AUTO
	OUT A~H	BYPASS
		TO YUV420
		TO 1080P
		AUTO

❶ **ALL:** Sets the 4K conversion mode for all outputs. Setting this to bypass will disable the 4K conversion function.
NOTE: Making changes to this setting will overwrite the individual output's settings.

❷ **OUT A~H:** Sets the 4K conversion mode to use for each output individually.
NOTE: 4K conversion is only available with 4K sources. Due to a chipset limitation, 4K sources using the 4:2:2 color space may display with incorrect colors when scaled to 1080p.

OUTPUT INFORMATION

MAIN MENU	LEVEL 2	LEVEL 3
OUTPUT INFORMATION	OUT A~H	[OUTPUT DETAILS]

❶ **OUT A~H:** Show the connection status, resolution and frame-rate for each output.

EDID CONTROL

MAIN MENU	LEVEL 2	LEVEL 3
EDID CONTROL	IN 1	**INT FHD 2CH**
		INT FHD MCH
		INT UHD 2CH
		INT UHD MCH
		INT UHD+ 2CH
		INT UHD+ MCH
		INT HDR 2CH
		Int HDR MCH
		User 1
		User 2
		Copy Out A
		Copy Out B
		Copy Out C
		Copy Out D
		Copy Out E
		Copy Out F
		Copy Out G
		Copy Out H
	IN 2	**INT FHD 2CH**
		Int FHD MCH
		Int UHD 2CH
		Int UHD MCH
		Int UHD+ 2CH
		Int UHD+ MCH
		Int HDR 2CH
		Int HDR MCH
		User 1
		User 2
		Copy Out A
		Copy Out B
		Copy Out C
		Copy Out D

MAIN MENU	LEVEL 2	LEVEL 3
EDID CONTROL	IN 2	COPY OUT E
		COPY OUT F
		COPY OUT G
		COPY OUT H
	VNDR	[Detailed EDID Information]
	NAME	
	RESO	
	FREQ	
	DEPTH	
	YCBCR	
	HDR	

❶ **IN1~2:** Show the current input's vendor name based on the source's info-frame data.
NOTE: Not all devices will provide this information.
❷ **NAME:** Show the current input's product name based on the source's info-frame data.
NOTE: Not all devices will provide this information.
❸ **FMT:** Show the video format of the current input.
❹ **RESO:** Show the resolution and frame-rate of the current input.
❺ **FREQ:** Show the signal frequency of the current input.
❻ **DEPTH:** Show the color bit-depth of the current input.
❼ **COLOR:** Show the color space of the current input.
❽ **HDCP:** Show the HDCP status of the current input.
❾ **AUDIO:** Show the audio format of the current input.
❿ **HDR:** Show the HDR status of the current input.

HDCP CONTROL

MAIN MENU	LEVEL 2	LEVEL 3
HDCP CONTROL	IN 1	APPLE MODE
		Refer Source
		REFER SINK
	IN 2	Apple Mode
		Refer Source
		REFER SINK
	Out A~H	[HDCP Status Information]

❶ **IN 1:** Sets the HDCP mode to use with Input 1.
❷ **IN 2:** Sets the HDCP mode to use with Input 1.
❸ **OUT A~H:** Show the current HDCP status of each Output (A~H).

CEC CONTROL

MAIN MENU	LEVEL 2	LEVEL 3
CEC CONTROL	AUTO ACTIVE	ON
		OFF
	AUTO STANDBY	ON
		OFF
	OUT A~H	[CEC Address Information]

❶ **AUTO ACTIVE:** Enable or disable sending the CEC *"active source"* command to connected displays every 10 minutes. *NOTE: The connected display must support the CEC "active source" command.*

❷ **AUTO STANDBY:** Enable or disable sending the CEC *"standby"* command to connected displays if there has been no live input source detected for more than 10 minutes. *NOTE: The connected display must support the CEC "standby" command.*

❸ **OUT A~H:** Shows the CEC address of each connected display.

REMOTE CONTROL

MAIN MENU	LEVEL 2	LEVEL 3
REMOTE CONTROL	LINK WITH	OFF
		OUT A~H **[OUT A]**
	HOT KEY	ON
		OFF
	[BUTTON AND HOT KEY ASSIGNMENT]	[CEC Address Information]

❶ **LINK WITH:** Select the display to accept CEC remote control commands from to control the unit or disable the functionality. The selected display's remote control can be used to navigate this unit's OSD menu using the remote's red, green, yellow and blue buttons by assigning them to the functions of the unit's front panel MENU, MINUS, PLUS, and ENTER buttons. *NOTE: Requires a compatible remote control and display.*

❷ **HOT KEY:** Enables or disables support for the additional front panel hot key functionality that is used when not in the OSD (IN 1, IN 2, and GROUP).

❸ **BUTTON AND HOT KEY ASSIGNMENT:** Lists how each of the colored buttons on the TV's remote will be assigned if the Remote Control function is enabled.

OSD SETTING

MAIN MENU	LEVEL 2	LEVEL 3
OSD SETTING	TIMEOUT	NEVER
		1~60 **[30]**
	HORIZONTAL	0~100 **[2]**
	VERTICAL	0~100 **[3]**
	TRANSPARENCY	0~7 **[3]**
	CONTRAST	0~1 **[0]**
	PANEL COLOR	RED
		GREEN
		BLUE

MAIN MENU	LEVEL 2	LEVEL 3
OSD SETTING	PANEL COLOR	**GRAY**
	FONT COLOR	BLACK
		WHITE
		RED
		GREEN
		BLUE
		YELLOW
		CYAN
		MAGENTA
	FREE RUN	NO
		RED
		GREEN
		BLUE
		BLACK
		COLOR
	DEFAULT	**NO**
		YES

❶ **TIMEOUT:** Set the OSD menu time out in seconds or disable the time out.

❷ **HORIZONTAL:** Set the OSD menu's horizontal position.

❸ **VERTICAL:** Set the OSD menu's vertical position.

❹ **TRANSPARENCY:** Set the OSD menu's transparency level.

❺ **CONTRAST:** Set the OSD menu contrast mode.

❻ **PANEL COLOR:** Set the OSD menu's panel color.

❼ **FONT COLOR:** Set the OSD menu's font color.

❽ **FREE RUN:** Set the Free Run color to display when no source is detected. Selecting *"Color"* will show a color bar pattern. Selecting *"No"* will disable the Free Run function.

❾ **DEFAULT:** Reset the OSD configuration settings to their factory defaults.

SYSTEM SETTING

MAIN MENU	LEVEL 2	LEVEL 3
SYSTEM SETTING	VID	[VENDOR ID]
	PID	[PRODUCT ID]
	SN	[SERIAL NUMBER]
	FW VER	[FIRMWARE VERSION]
	FACTORY RESET	**NO**
		YES
	SOFTWARE CONTROL	**OFF**
		ON

❶ **VID:** Show the unit's Vendor ID.

❷ **PID:** Show the unit's Product ID.

❸ **SN:** Show the unit's Serial Number.

❹ **FW VER:** Show the unit's current firmware version.

❺ **FACTORY RESET:** Reset the unit's configuration to the factory defaults.

❻ **SOFTWARE CONTROL:** Enable or Disable RS-232 support for connecting to the EDID Management Software.

NOTE: Enabling this function will allow the EDID Management program to discover and control the unit. It will however disable any manual RS-232 control of the unit.

RS-232 PIN DEFINITION

PIN	ASSIGNMENT		PIN	ASSIGNMENT
1	NC		1	NC
2	TxD		2	RxD
3	RxD	→	3	TxD
4	NC		4	NC
5	GND		5	GND
6	NC	←	6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 110 ~ 921600
Data Bit: 8 bits
Parity: None
Stop Bit: 1 bit
Flow Control: None

RS-232 COMMANDS

COMMAND	DESCRIPTION & PARAMETERS
SYSTEM COMMANDS	
? ↵	Show the full command list.
HELP ↵	Show the full command list.
HELP N1 ↵	Show details about a specific command. **N1** = {Command} [Base RS-232 Command]
GET MODEL NAME ↵	Show the unit's model name.
GET FW VER ↵	Show the unit's current firmware version.
SET SYSTEM REBOOT ↵	Reboot the unit.
SET DESCRIPTION N1 ↵	Set the description/name of the unit. **N1** = {Unit Name} [Alphanumeric, 64 chars max]
GET DESCRIPTION ↵	Show the unit's current description/name.
SET KEYLOCK N1 ↵	Enable or disable the front panel key lock. Available values for **N1**: ON [Enable Key Lock] OFF [Disable Key Lock]
GET KEYLOCK ↵	Show the current front panel key lock status.
SET OSD DEFAULT ↵	Reset the OSD configuration to the factory defaults.
SET FACTORY DEFAULT ↵	Reset all configurations to the factory defaults.

RS-232 COMMANDS

COMMAND	DESCRIPTION & PARAMETERS
INPUT COMMANDS	
GET IN PORT NUMBER ↵	Report the number of inputs supported by the unit.
GET IN TYPE LIST ↵	List the video format supported by each Input.
GET IN N1 FORMAT ↵	Show Input N1's video format. **N1** = 1 ~ 2 [Input Port] Valid response values are: 0 [Not Active] 1 [DVI Mode] 2 [HDMI Mode]
GET IN N1 COLOR SPACE ↵	Show Input N1's current color space. **N1** = 1 ~ 2 [Input Port] Valid response values are: 0 [Not Active] 1 [RGB] 2 [YUV 4:4:4] 3 [YUV 4:2:2] 4 [YUV 4:2:0]
GET IN N1 COLOR DEPTH ↵	Show Input N1's current color bit depth. **N1** = 1 ~ 2 [Input Port] Valid response values are: 0 [Not Active] 8 [8-bit] 10 [10-bit] 12 [12-bit] 16 [16-bit]
GET IN N1 TIMING ↵	Show Input N1's current resolution and timing. **N1** = 1 ~ 2 [Input Port] ***NOTE:** Only works with a currently displayed Input.*
SET IN N1 HDCP MODE N2 ↵	Set Input N1's HDCP mode to N2. **N1** = 1 ~ 2 [Input Port] Available settings for **N2**: 0 [Apple Mode] 1 [Refer to Source] 2 [Refer to Sink]
GET IN N1 HDCP MODE ↵	Get Input N1's current HDCP mode. **N1** = 1 ~ 2 [Input Port]
GET IN N1 HDCP STATUS ↵	Get Input N1's current HDCP status. **N1** = 1 ~ 2 [Input Port] Valid response values are: 0 [No HDCP] 1 [HDCP 1.4] 2 [HDCP 2.2]

RS-232 COMMANDS

COMMAND	DESCRIPTION & PARAMETERS
SET IN N1 EDID N2 ↵	Assign EDID N2 to be used with Input N1. N1 = 1 ~ 2 [Input Port] Available values for **N2**: 1 [Int FHD 2CH] 2 [Int FHD Multi-CH] 3 [Int UHD 2CH] 4 [Int UHD Multi-CH] 5 [Int UHD+ 2CH] 6 [Int UHD+ Multi-CH] 7 [Int HDR 2CH] 8 [Int HDR Multi-CH] 9 [User EDID 1] 10 [User EDID 2] 11 [Copy Output A] 12 [Copy Output B] 13 [Copy Output C] 14 [Copy Output D] 15 [Copy Output E] 16 [Copy Output F] 17 [Copy Output G] 18 [Copy Output H]
GET IN N1 EDID ↵	Show Input N1's current EDID mode. **N1** = 1 ~ 2 [Input Port]
GET IN N1 EDID DATA ↵	Show the raw hex data for the EDID currently assigned to Input N1. **N1** = 1 ~ 2 [Input Port]
GET IN N1 EDID INFORMATION ↵	Show a description of the EDID assigned to Input N1. **N1** = 1 ~ 2 [Input Port]
OUTPUT COMMANDS	
GET OUT PORT NUMBER ↵	Report the number of outputs supported by the unit.
GET OUT TYPE LIST ↵	Show the video format supported by each output.
SET OUT ROUTE N1 ↵	Route Input N1 to all Outputs. **N1** = 1 ~ 2 [Input Port] ***NOTE:** Setting this will disable Group Mode.*
GET OUT ROUTE ↵	Show the current video routing source.
SET OUT AUTO SWITCH N1 ↵	Enable or disable automatic input source switching. Available values for **N1**: ON [Auto Switch Enabled] OFF [Auto Switch Disabled] ***NOTE:** Only active when Group Mode is disabled.*
GET OUT AUTO SWITCH ↵	Shows the current automatic input source switching setting.
SET OUT GROUP MODE N1 ↵	Enable or disable Group Mode. Available values for **N1**: ON [Group Mode Enabled] OFF [Group Mode Disabled]
GET OUT GROUP MODE ↵	Show the current Group Mode setting

RS-232 COMMANDS

| COMMAND	DESCRIPTION & PARAMETERS
SET OUT N1 CONVERT N2 ↵	Sets the 4K source conversion mode to use on Output N1. **N1** = A ~ H [Output Port] Available values for **N2**: 0 [Bypass, No Conversion] 1 [Convert to YUV 4:2:0] 2 [Convert to 1080p] 3 [Auto Conversion] ***NOTE:*** *4K conversion is only available with 4K sources.*
GET OUT N1 CONVERT ↵	Show the 4K source conversion mode used by Output N1. **N1** = A ~ H [Output Port]
GET OUT N1 HPD ↵	Show the current hot-plug status of Output N1. **N1** = A ~ H [Output Port]
GET OUT N1 RSENSE ↵	Show the current receiver sense status of Output N1. **N1** = A ~ H [Output Port]
GET OUT N1 HDCP STATUS ↵	Show the current HDCP status of Output N1. **N1** = A ~ H [Output Port] Valid response values are: 0 [No HDCP] 1 [HDCP 1.4 Active] 2 [HDCP 2.2 Active] 3 [HDCP 1.4 Retrying] 4 [HDCP 2.2 Retrying]
GET OUT N1 EDID DATA ↵	Show the raw hex data of the EDID read from Output N1. **N1** = A ~ H [Output Port]
GET OUT N1 EDID INFORMATION ↵	Show a description of the EDID read from Output N1. **N1** = A ~ H [Output Port]
USER EDID COMMANDS	
GET USER EDID NUMBER ↵	Show the number of User EDIDs supported by the unit.
SET USER N1 EDID DATA N2 ↵	Update the contents of User EDID N1 with new raw hex data. **N1** = 1 ~ 2 [User EDID Number] **N2** = {Hex Data} [Raw EDID Hex Data]
GET USER N1 EDID DATA ↵	Show the raw hex data of the EDID stored in User EDID N1. **N1** = 1 ~ 2 [User EDID Number]
GET USER N1 EDID INFORMATION ↵	Show a description of the EDID stored in User EDID N1. **N1** = 1 ~ 2 [User EDID Number]
OSD COMMANDS	
SET OSD TIMEOUT N1 ↵	Set the OSD time out value. Available values for **N1**: 0 [No Timeout] 1 ~ 60 [Timeout in Seconds]
GET OSD TIMEOUT ↵	Show the current OSD timeout value.
GET OUT GROUP MODE ↵	Show the current Group Mode setting
SET OSD HORIZONTAL N1 ↵	Set the OSD menu's horizontal position. **N1** = 0 ~ 100 [Horizontal Position]

RS-232 COMMANDS

| COMMAND	DESCRIPTION & PARAMETERS
GET OSD HORIZONTAL ↵	Show the OSD menu's current horizontal position. **N1** = 0 ~ 100　　　[Vertical Position]
SET OSD VERTICAL N1 ↵	Set the OSD menu's vertical position.
GET OSD VERTICAL ↵	Show the OSD menu's current vertical position.
SET OSD TRANSPARENCY N1 ↵	Set the OSD menu's transparency level. Available values for **N1**: 0　　　[Fully Opaque] 1 ~ 6　　[Levels of Transparency] 7　　　[Fully Transparent]
GET OSD TRANSPARENCY ↵	Show the OSD menu's current transparency level.
SET OSD CONTRAST N ↵	Set the OSD menu's contrast level. Available values for **N1**: 0　　　[High Contrast] 1　　　[Low Contrast]
GET OSD CONTRAST ↵	Show the OSD menu's current contrast level.
SET OSD PANEL COLOR N1 ↵	Set the OSD menu's background color. Available values for **N1**: 1　　　[Red] 2　　　[Green] 3　　　[Blue] 4　　　[Gray]
GET OSD PANEL COLOR ↵	Show the OSD menu's current background color.
SET OSD FONT COLOR N1 ↵	Set the OSD menu's font color. Available values for **N1**: 1　　　[Black] 2　　　[White] 3　　　[Red] 4　　　[Green] 5　　　[Blue] 6　　　[Yellow] 7　　　[Cyan] 8　　　[Magenta]
GET OSD FONT COLOR ↵	Show the OSD menu's current font color.
SET OSD FREERUN COLOR N1 ↵	Set the Free Run mode and the color used when the input signal is lost and Free Run is active. Available values for **N1**: 0　　　[Free Run Disabled] 1　　　[Red] 2　　　[Green] 3　　　[Blue] 4　　　[Black] 5　　　[Color Bars]
GET OSD FREERUN COLOR ↵	Show the current Free Run color setting.

RS-232 COMMANDS

COMMAND	DESCRIPTION & PARAMETERS
CEC COMMANDS	
SET CEC AUTO ACTIVE N1 ↵	Enable or disable sending the CEC *"active source"* command to connected displays every 10 minutes. Available values for **N1**: ON [Enable Active Source] OFF [Disable Active Source] ***NOTE:** The connected display must support the CEC "active source" command.*
GET CEC AUTO ACTIVE ↵	Show the current CEC Active Source setting.
SET CEC AUTO STANDBY N1 ↵	Enable or disable sending the CEC *"standby"* command to connected displays if there has been no live input source detected for more than 10 minutes. Available values for **N1**: ON [Enable Auto Standby] OFF [Disable Auto Standby] ***NOTE:** The connected display must support the CEC "standby" command.*
GET CEC AUTO STANDBY ↵	Show the current CEC Auto Standby setting.
SET CEC REMOTE LINK N1 ↵	Select the display/output to accept CEC remote control commands from to control the unit, or disable the feature. Available values for **N1**: OFF [Disable Feature] A ~ H [Enabled Output Port] ***NOTE:** Requires a compatible remote control and display.*
SET OSD VERTICAL N1 ↵	Set the OSD menu's vertical position.
GET OSD VERTICAL ↵	Show the OSD menu's current vertical position.
SET OSD TRANSPARENCY N1 ↵	Set the OSD menu's transparency level. Available values for **N1**: 0 [Fully Opaque] 1 ~ 6 [Levels of Transparency] 7 [Fully Transparent]
GET CEC REMOTE LINK ↵	Show the current CEC Remote Link setting.

NOTE: *Commands will not be executed unless followed by a carriage return. Commands are not case-sensitive.*

RS-232 SCREENSHOTS
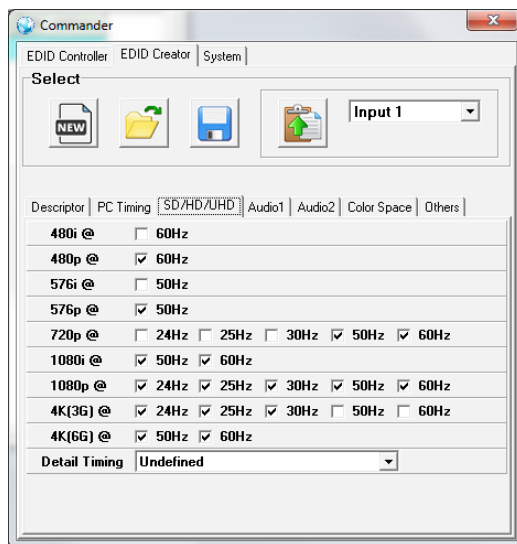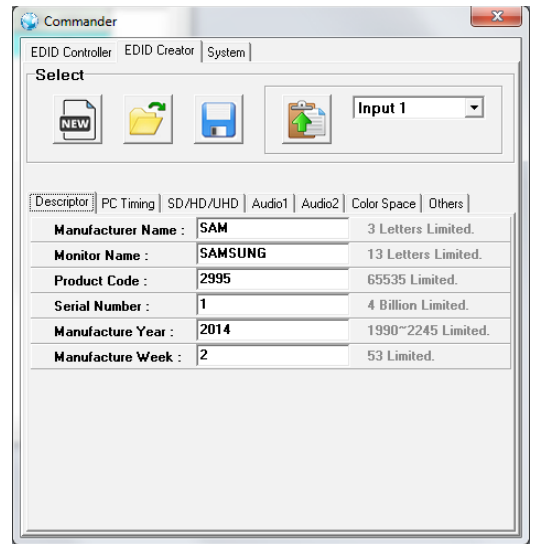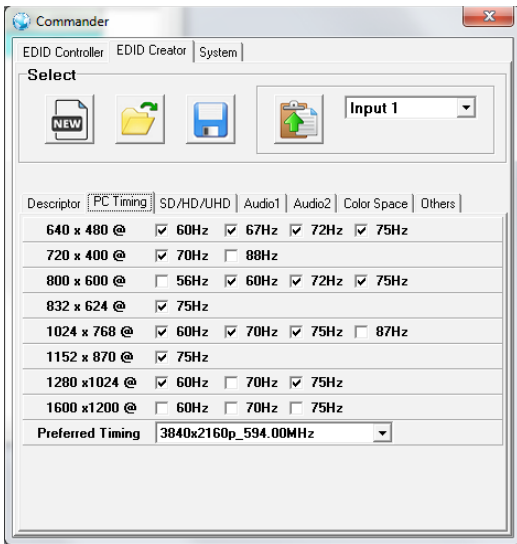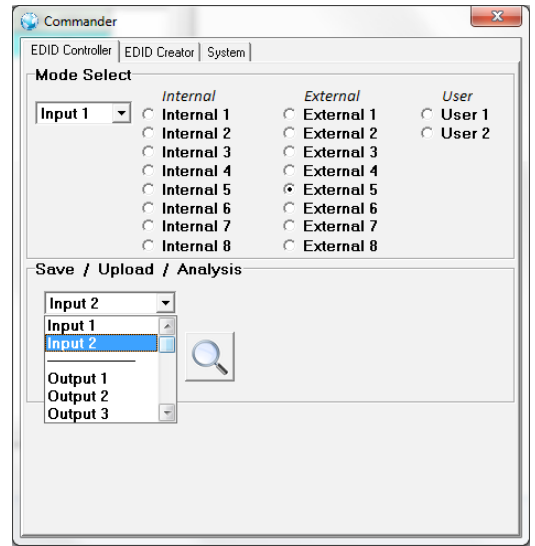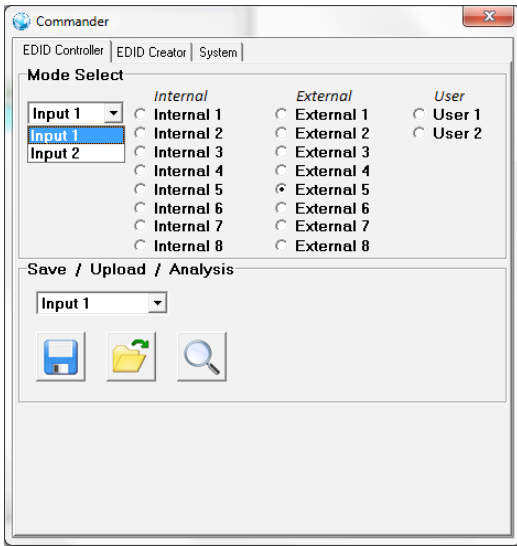
RS-232 SCREENSHOTS
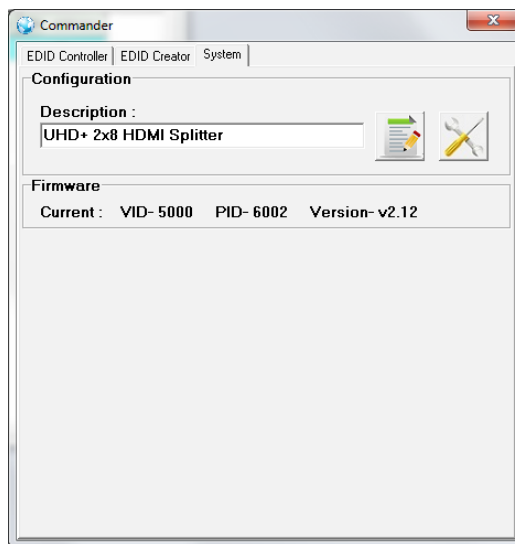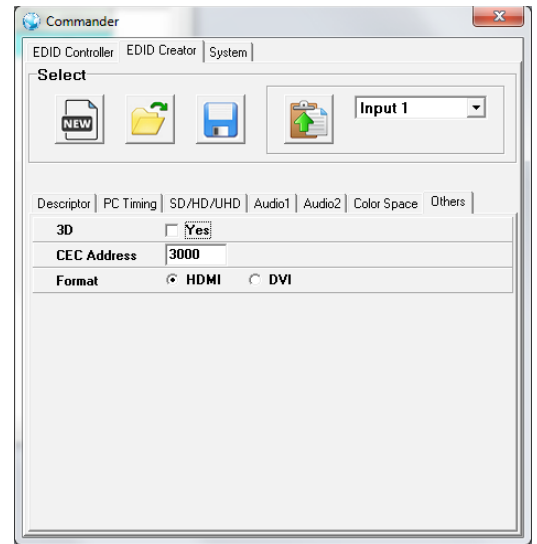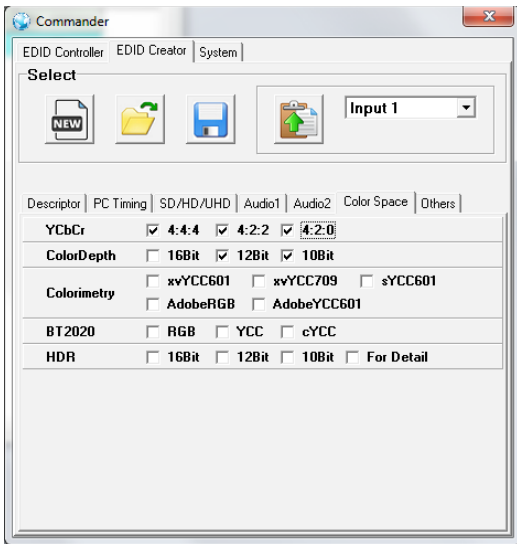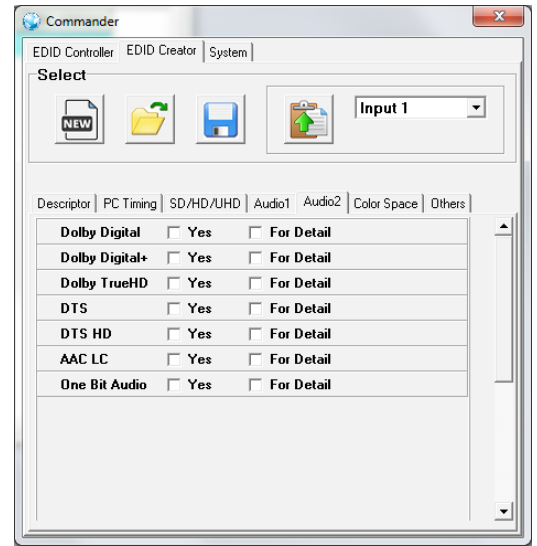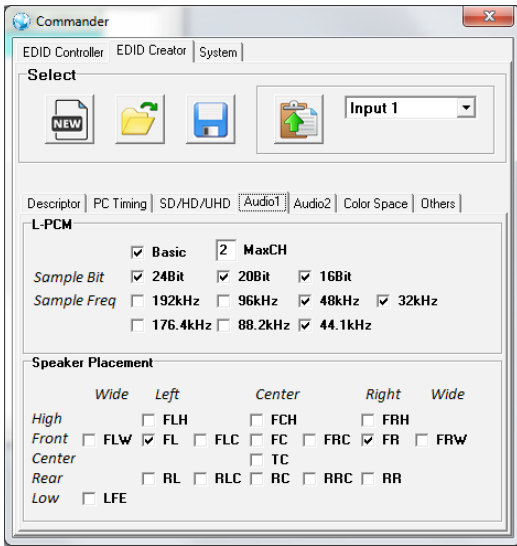
EDID MANAGEMENT

This unit uses an EDID Management application which allows the user to copy the EDID from an attached display, edit an existing EDID file stored on the PC or create a basic EDID from scratch. The EDID can then be uploaded to the unit for use. Obtain the EDID Management software from your authorized dealer and save it in a directory where you can easily find it.

The EDID Management software does not require installation. It is a stand-alone program (.EXE.) From the saved location of the program, launch the software by double-clicking on the icon and the EDID Management device detection window will open up on your screen.
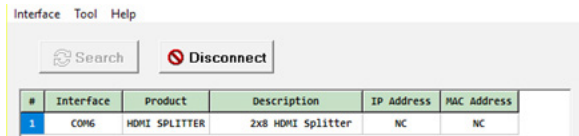
After launching the software, power the unit on and then connect it to the PC/laptop using an RS-232 cable. Click on the **SEARCH** button and any detected units will be displayed in the list. Clicking on a detected unit will open the EDID Management window.

NOTE: if the program fails to detect the ANI-28UHDDA check that Software Control is Enabled (See section OSD, System Settings)

EDID CONTROLLER

- **MODE SELECT**: Under the *"EDID Controller"* tab the user may select the EDID to be sent to the selected HDMI input from (8) Internal, (8) External (bypass) or (2) User EDID options. When a new EDID is selected, the EDID used by the unit will change immediately.
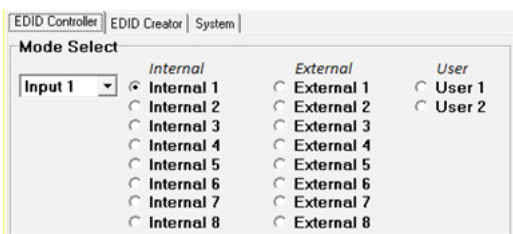
- **SAVE/UPLOAD/ANALYSIS:** EDIDs may also be saved, uploaded or analyzed.

  - **SAVE:** Any EDID from the unit or a connected HDMI display can be saved to your PC as a *.bin file by selecting the EDID source from the drop-down menu and then clicking the *"Save"* icon.
  - **UPLOAD:** Previously saved EDID files (*.bin format) can be re- uploaded into any of the *"User"* EDID slots by selecting the User EDID to replace from the drop down and then clicking the *"Upload"* icon. Before accepting the upload, the software will check and verify that the EDID's header and checksum values are acceptable.
- **ANALYSIS:** To analyze any EDID stored within the unit, select the EDID to view from the drop down and click on the *"Analysis"* icon. From the Analyzer window it is possible to open the currently analyzed EDID in the *"EDID Creator"* by clicking the **EDIT** button.

EDID MANAGEMENT

EDID CREATOR

• **SELECT:** Click on the *"EDID Creator"* tab to begin designing a new EDID from scratch (select the *"New"* icon), to modify an existing EDID stored on the PC as a *.bin file (select the *"Load"* icon) or to edit an EDID copied from the unit via the EDID Analyzer's edit option.
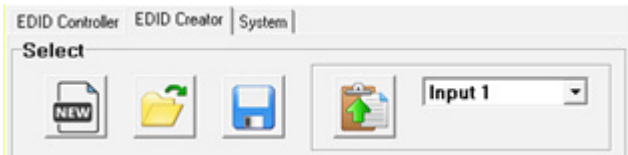
- Selecting *"New"* will automatically populate the various EDID fields with basic information that can be easily edited to match the user's preferences.
- Clicking on the *"Load"* icon will open a file load window and after the *.bin file has been selected and loaded the EDID fields will be populated with the information from that file. The same will happen when the EDID is copied from the *"EDID Analyzer"* window.

• **EDIT:** The following tabs provide access to a wide range of EDID information which can be edited:

- **DESCRIPTOR:** This tab allows for the editing of various description and information fields within the EDID file such as Manufacturer Name, Monitor Name, etc.
- **PC TIMING & SD/HD/UHD:** These tabs allow for the selection of the resolutions and refresh rates that the EDID will report as supported.
- **AUDIO1 & AUDIO2:** These tabs allow for the selection of which audio formats, audio frequencies, channels and speaker locations are supported.
- **COLOR SPACE:** This tab allows for the selection of which color formats and bit depths are supported, including BT.2020 and HDR support options.
- **OTHERS:** This tab contains options for supporting 3D and defining the CEC Address. Once the user is finished editing or creating an EDID it can be saved to a *.bin file locally or uploaded directly to the unit using the *"Save"* and *"Upload"* icons respectively.

SYSTEM

• **CONFIGURATION & FIRMWARE:** Select the *"System"* tab to edit the software's description (select the *"Rename"* icon), to reset the unit to factory defaults (select the *"Reset"* icon) and to view the unit's current hardware and firmware version information.
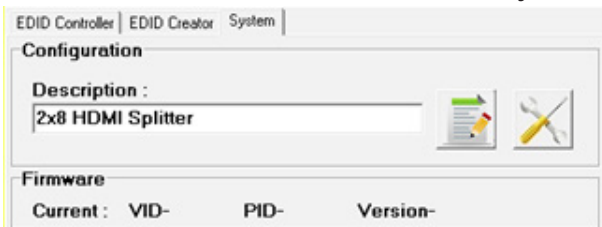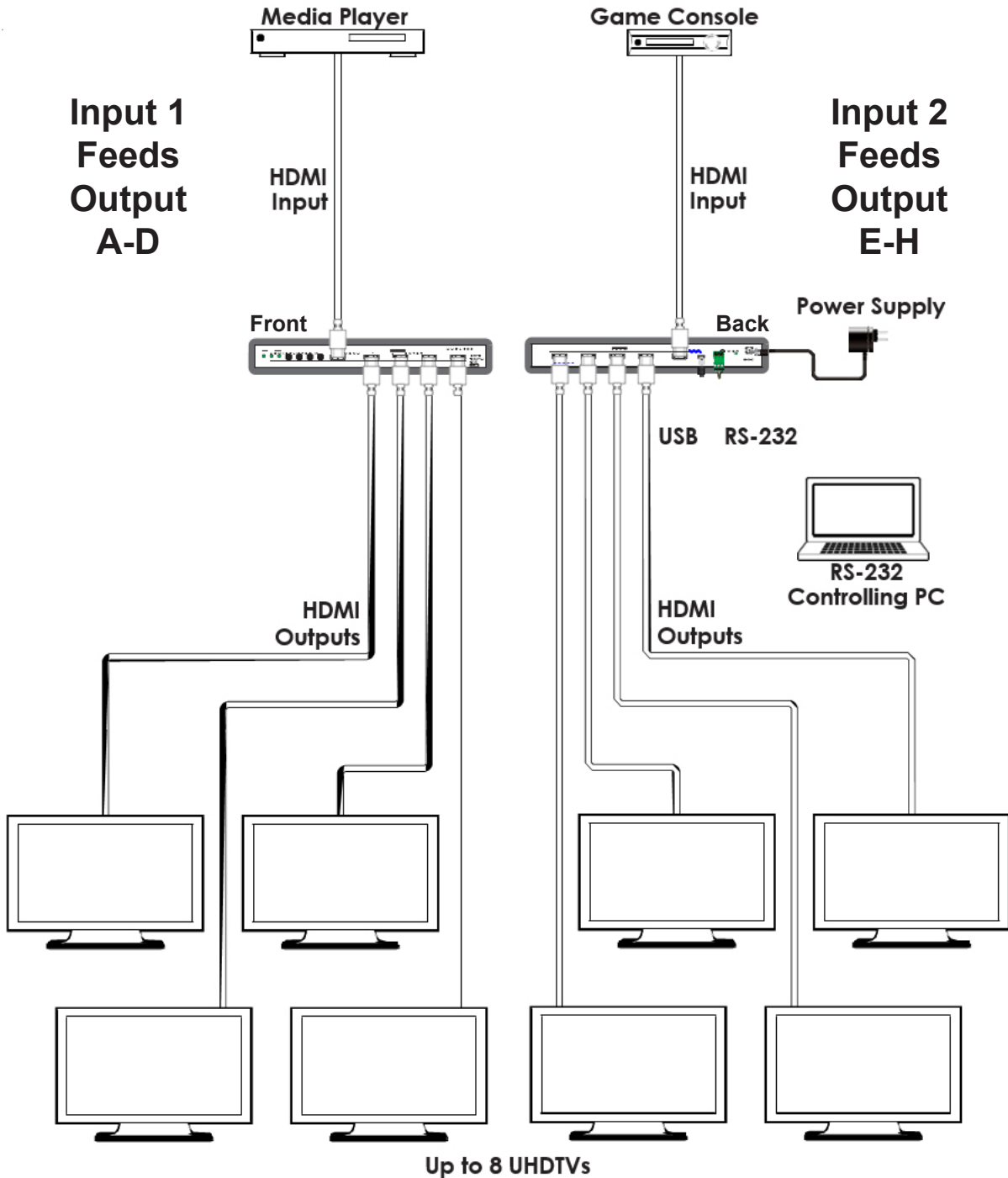
CONNECTION DIAGRAM: GROUP MODE OFF (1X8)
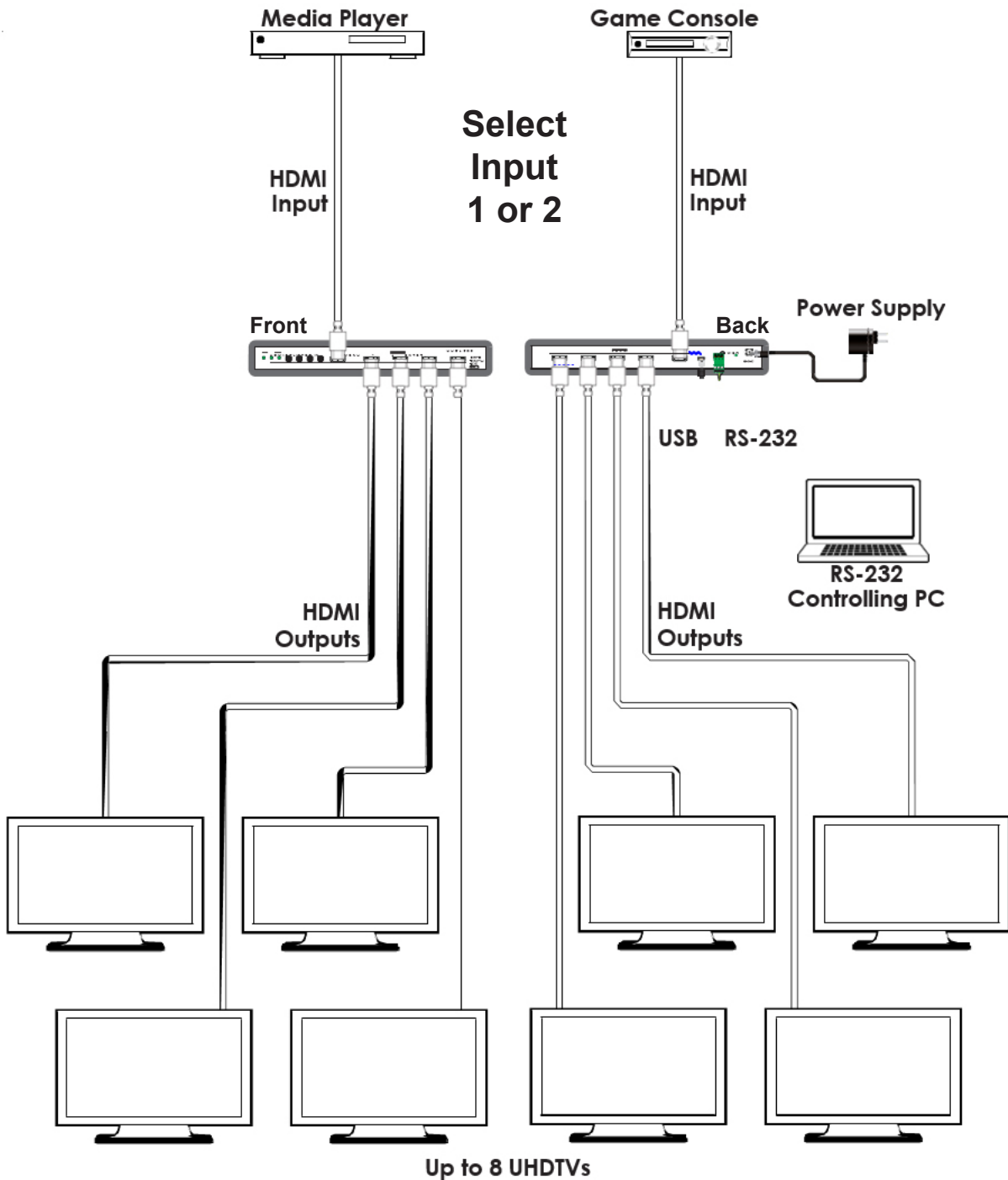
When in the 1x8 mode, the **GROUP LED** will not illuminate. The 1 or 2 LED will indicate which input port is selected.

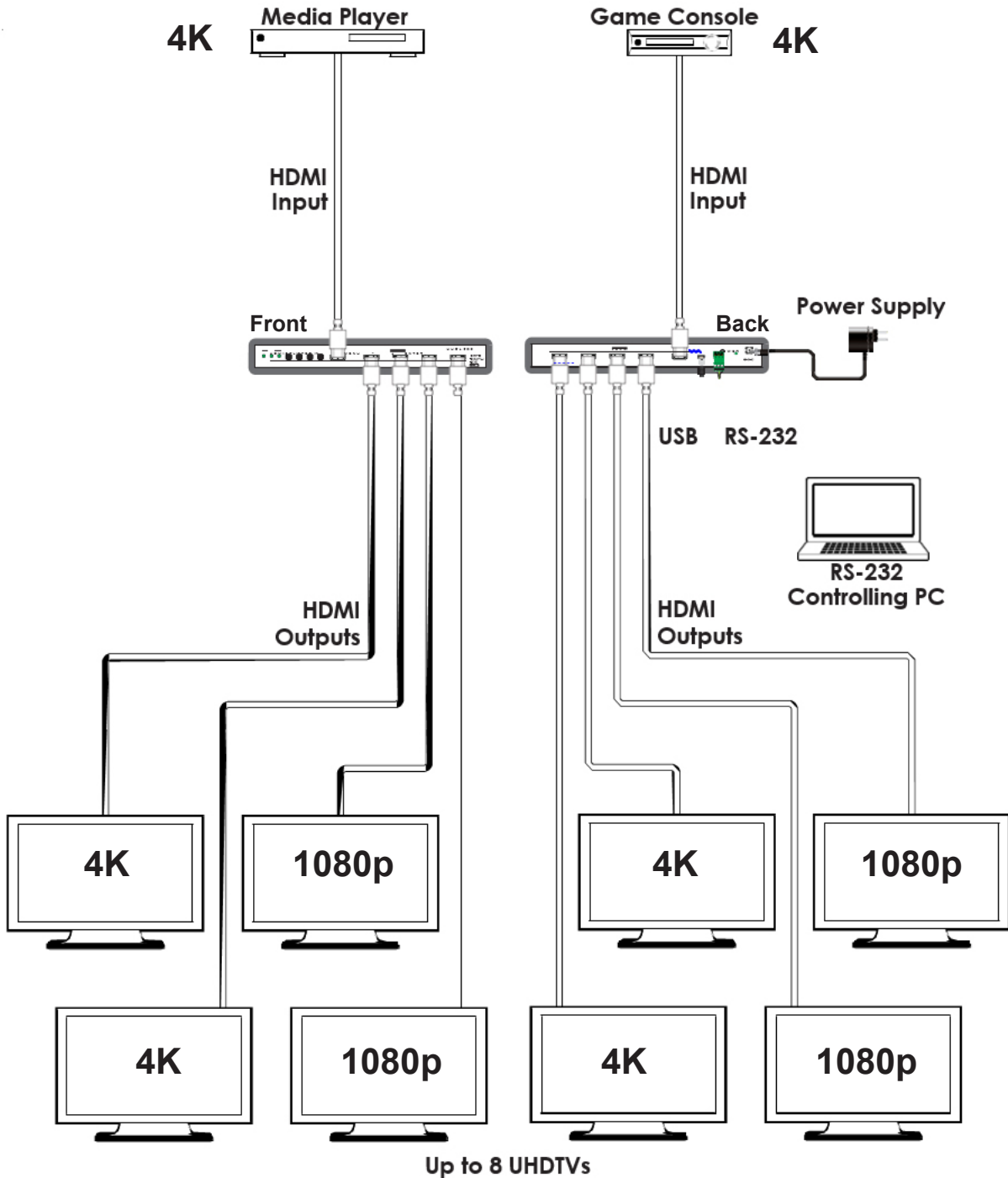## CONNECTION DIAGRAM: GROUP MODE ON (2:1X4)

When in the group mode, the **GROUP LED** will illuminate.

The 1 / 2 LED will illuminate to indicate a live source. If no source is detected, the 1 / 2 LED will remain OFF.

When in the group mode, switching inputs will change the unit back to the 1x8 mode and the GROUP LED will turn OFF.

CONNECTION DIAGRAM: SCALER FUNCTION

NOTE: *4K conversion is only available with 4K sources. Due to a chipset limitation, 4K sources using the 4:2:2 color space may display with incorrect colors when scaled to 1080p.*

VIDEO SPECIFICATIONS

INPUT & OUTPUT SUPPORTED RESOLUTIONS (HZ)				
640x480p@60	800x600p@85	1280x768p@60 (RB)	1400x1050p@60 (RB)	1920x1080p@30
640x480p@72	848x480p@60	1280x768p@75	1440x900p@60	1920x1080p@50
640x480p@75	1024x768p@60	1280x768p@85	1440x900p@60 (RB)	1920x1080p@59
640x480p@85	1024x768p@70	1280x800p@60	1440x900p@75	1920x1080p@60
720x400p@70	1024x768p@75	1280x800p@60 (RB)	1600x900p@60 (RB)	1920x1080i@50
720x400p@85	1024x768p@85	1280x800p@75	1600x1200p@60	1920x1080i@59
720x480i@59	1152x864p@70	1280x800p@85	1600x1200p@65	1920x1080i@60
720x480i@60	1152x864p@75	1280x960p@60	1600x1200p@70	1920x1200p@60 (RB)
720x480p@59	1152x864p@85	1280x960p@85	1600x1200p@75	2048x1080p@23
720x480p@60	1280x720p@25	1280x1024p@60	1600x1200p@85	2048x1080p@24
720x576i@50	1280x720p@29	1280x1024p@75	1680x1050p@60	2048x1080p@25
720x576p@50	1280x720p@30	1280x1024p@85	1680x1050p@60 (RB)	2048x1080p@29
800x600p@56	1280x720p@50	1360x768p@60	1920x1080p@23	2048x1080p@30
800x600p@60	1280x720p@59	1366x768p@60 (RB)	1920x1080p@24	2048x1080p@50
800x600p@72	1280x720p@60	1366x768p@60	1920x1080p@25	2048x1080p@59
800x600p@75	1280x768p@60	1400x1050p@60	1920x1080p@29	2048x1080p@60

INPUT & OUTPUT SUPPORTED RESOLUTIONS (HZ) CAN CONVERT TO 1080P				
3840x2160p@23 (4:2:2)	3840x2160p@59 (4:2:0)	3840x2160p@30 (4:4:4)	4096x2160p@50 (4:2:0)	4096x2160p@29 (4:4:4)
3840x2160p@24 (4:2:2)	3840x2160p@60 (4:2:0)	4096x2160p@23 (4:2:2)	4096x2160p@59 (4:2:0)	4096x2160p@30 (4:4:4)
3840x2160p@25 (4:2:2)	3840x2160p@23 (4:4:4)	4096x2160p@24 (4:2:2)	4096x2160p@60 (4:2:0)	
3840x2160p@29 (4:2:2)	3840x2160p@24 (4:4:4)	4096x2160p@25 (4:2:2)	4096x2160p@23 (4:4:4)	
3840x2160p@30 (4:2:2)	3840x2160p@25 (4:4:4)	4096x2160p@29 (4:2:2)	4096x2160p@24 (4:4:4)	
3840x2160p@50 (4:2:0)	3840x2160p@29 (4:4:4)	4096x2160p@30 (4:2:2)	4096x2160p@25 (4:4:4)	

INPUT & OUTPUT SUPPORTED RESOLUTIONS (HZ) CAN CONVERT TO 1080P & TO 4:2:0				
3840x2160p@50 (4:4:4)	3840x2160p@60 (4:4:4)	4096x2160p@50 (4:4:4)	4096x2160p@59 (4:4:4)	4096x2160p@60 (4:4:4)
3840x2160p@59 (4:4:4)				

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