

ANI-8X2MFS

8x2 4K@60Hz MULTI-FORMAT HDMI/DP/USB-C/VGA to HDMI/HDBaseT
SCALER PRESENTATION SWITCH w/ AUDIO





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

INTRODUCTION1
 FEATURES & CONTENTS2
 SPECIFICATIONS3
 VIDEO SPECIFICATIONS4
 AUDIO SPECIFICATIONS6
 CABLE SPECIFICATIONS / HDBASET™ FEATURES7
 FRONT PANEL8
 BACK PANEL9
 IR CABLE PINOUTS & RS-232 PINOUT & DEFAULTS11
 OSD MENU12
 WEBGUI CONTROL23
 TELNET CONTROL / SERIAL & TELNET COMMANDS30
 CONNECTION DIAGRAM39
 OPTIONAL RECEIVER40

INTRODUCTION

This 8 by 2 multi-format scaling switcher provides HDMI, USB-C, DisplayPort, and VGA inputs which can be freely selected for output at a scaled resolution of the user’s choosing over the mirrored HDMI and HDBaseT™ outputs. The HDMI, DisplayPort, and USB-C inputs and HDMI output support resolutions up to 4K@60 (4:4:4, 8-bit) while the VGA input supports resolutions up to WUXGA. The HDBaseT™ output supports automatic color subsampling of 4K50/60(4:4:4) sources to 4K50/60(4:2:0) and provides a great solution to extend your audio and video up to 100 meters over a single run of CAT6A cable as well as providing PoH power to a compatible HDBaseT™ receiver.

This unit also includes multiple analog stereo audio inputs and a microphone input along with an amplified analog stereo output to provide a range of audio routing and mixing flexibility. The built-in audio mixer function allows the user to mix audio from any LPCM 2.0 source with the microphone input for presentation or lecture usage. The ability to switch back and forth between mixed and non-mixed audio greatly simplifies the presentation experience.

A trigger input interface is also provided to allow the easy addition of a remote control keypad, or other trigger-supporting products, which can be installed within a podium or within a table in a conference room or classroom. This interface can allow the user to activate functions with the simple press of a button. Standard control is available via front panel buttons with an On-Screen Display (OSD), WebGUI, Telnet, Triggers, and RS-232 making it exceptionally versatile. This product has a 3 year warranty.

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.

We reserve the right to make improvements to this document and/or product at any time and without notice.

COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means — electronic, mechanical, magnetic, optical, chemical, manual, or otherwise — without the express written permission and consent.

© Copyright 2020. All Rights Reserved.
 Version 1.0 MAR 2020

TRADEMARK ACKNOWLEDGMENTS

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.

FEATURES

- HDMI 2.0 and DVI 1.0 compliant
- HDCP 1.x and 2.2 compliant
- (8) video inputs (USB-C, DisplayPort, (5) HDMI, VGA)
- (2) mirrored video outputs (HDMI, HDBaseT™)
- Supports switching and scaling of all AV inputs for display over the mirrored HDMI and HDBaseT™ outputs
- Supports up to 4K UHD (18Gbps, 4K@50/60Hz 4:4:4, 8-bit) digital video input (HDMI, USB-C, DP) and output (HDMI)
- VGA input supports resolutions up to 1080p60/WUXGA (RB)
- HDBaseT™ output supports resolutions up to 4K@60Hz (4:2:0, 8-bit) or 4K@30Hz (4:4:4, 8-bit). 4K@50/60Hz (4:4:4, 8-bit) or 4K@ any (10/12-bit) sources will be automatically color space converted to fit within the available bandwidth
- Supports Deep Color input and output up to 12-bit (Bypass only)
- Supports 10-bit and 12-bit HDR (High Dynamic Range) input/output (HDMI Bypass only)
- HDBaseT™ output extends video, audio, and data over a single CAT5e/6/7 cable and can reach distances up to 100M/328ft at 4K when using CAT6A/7
- Supports pass-through of many audio formats including LPCM (up to 8 channels), Bitstream and HD Bitstream
- Audio mixer function allows the mixing of audio from any LPCM 2.0 audio source with the microphone input
- Trigger Control Keypad support for easy, single-button, function activation (Optional)
- Supports standard PoH (PSE) from the HDBaseT™ output to a connected HDBaseT™ (PD) receiver (Optional ANI-7251RX)
- USB Type-C port provides up to 60W of power to connected devices
- Comprehensive EDID and HDCP management
- Controllable via front panel controls with OSD, RS-232, Telnet, WebGUI, and triggers

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-8X2MFS UHD+ 8x2 Multi-Format to HDMI/HDBaseT™ Switcher with Scaler
- 24V/6.25A DC Power Adapter
- Rackmount Ears (Set of 2)
- Shockproof Feet (Set of 4)
- Users Guide

APPLICATIONS

- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

SYSTEM REQUIREMENTS

- HDMI/DisplayPort/USB-C source equipment such as media players, video game consoles or set-top boxes.
- VGA source equipment such as a PC, or laptop.
- HDMI receiving equipment such as an HDTV, monitor, or audio amplifier.
- Analog audio receiving equipment such as audio amplifiers or powered speakers.
- A compatible HDBaseT™ receiver with PoH(PD) support is recommended. (ANI-7251RX)
- The use of Premium High Speed HDMI cables, and industry standard CAT6, CAT6A or CAT7, is highly recommended.

SPECIFICATIONS

- **HDMI Bandwidth:** 18Gbps
- **DisplayPort Bandwidth:** 21.6Gbps
- **USB-C Bandwidth:** 21.6Gbps
- **VGA Bandwidth:** 165MHz
- **HDBaseT™ Bandwidth:** 10.2Gbps
- **Input Ports**
 - USB (Type-C)
 - DisplayPort
 - (5) HDMI (Type-A)
 - VGA (HD-15)
 - (6) Stereo Audio (3.5mm)
 - Microphone (6.35mm)
- **Output Ports:**
 - HDMI (Type-A)
 - HDBaseT™ (RJ-45)
 - Stereo Audio (5-pin Terminal Block)
 - Stereo Audio ((2) 2-pin Term. Blocks)
- **Pass-through Ports:**
 - IR Extender (3.5mm)
 - IR Blaster (3.5mm)
 - RS-232 (4-pin Terminal Block)
 - (2) Power Relay (2-pin Terminal Block)
- **Pass-through/Control Port:** LAN (RJ-45)
- **Control Ports:**
 - RS-232 (4-pin Terminal Block)
 - Trigger (10-pin Terminal Block)
- **Service Port:** USB 2.0 (Type-A)
- **IR Frequency:** 30 ~ 50kHz (30 ~ 60kHz under ideal conditions)
- **Baud Rate:** Up to 115200 (19200 Control Default)
- **Power Supply:** 24V/6.25A DC (US/EU standards, CE/FCC/UL certified)
- **ESD Protection (HBM):**
 - ±8kV (Air Discharge)
 - ±4kV (Contact Discharge)
- **Dimensions (WxHxD):** 17 x 1.7 x 6.5 in (432x43x164mm) [Case Only] / 17 x 1.7 x 6.9 in (432x43x174mm) [All Inclusive]
- **Weight:** 5.5 lb / 2488g
- **Chassis Material:** Metal (Steel)
- **Chassis 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 (Non-condensing)
- **Power Consumption:** 143W

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

BYPASS OUTPUT

SUPPORTED RESOLUTIONS (HZ)	INPUT				BYPASS OUTPUT	
	HDMI	DP	USBC	VGA	HDMI	HDBT
720x400p@70/85	✓	✓	✓	✓	✓	✓
640x480p@60/72/75/85	✓	✓	✓	✓	✓	✓
720x480i@60	✓	✓	✓	X	✓	✓
720x480p@60	✓	✓	✓	✓	✓	✓
720x576i@50	✓	✓	✓	X	✓	✓
720x576p@50	✓	✓	✓	✓	✓	✓
800x600p@56/60/72/ 75/85	✓	✓	✓	✓	✓	✓
848x480p@60	✓	✓	✓	✓	✓	✓
1024x768p@60/70/75/85	✓	✓	✓	✓	✓	✓
1152x864p@75	✓	✓	✓	✓	✓	✓
1280x720p@50/60	✓	✓	✓	✓	✓	✓
1280x768p@60/75/85	✓	✓	✓	✓	✓	✓
1280x800p@60/75/85	✓	✓	✓	✓	✓	✓
1280x960p@60/85	✓	✓	✓	✓	✓	✓
1280x1024p@60/75/85	✓	✓	✓	✓	✓	✓
1360x768p@60	✓	✓	✓	✓	✓	✓
1366x768p@60	✓	✓	✓	✓	✓	✓
1400x1050p@60	✓	✓	✓	✓	✓	✓
1440x900p@60/75	✓	✓	✓	✓	✓	✓
1600x900p@60RB	✓	✓	✓	✓	✓	✓
1600x1200p@60	✓	✓	✓	✓	✓	✓
1680x1050p@60	✓	✓	✓	✓	✓	✓
1920x1080i@50/60	✓	✓	✓	X	✓	✓
1920x1080p@24/25/30	✓	✓	✓	✓	✓	✓
1920x1080p@50/60	✓	✓	✓	✓	✓	✓
1920x1200p@60RB	✓	✓	✓	✓	✓	✓
2560x1440p@60RB	✓	✓	✓	X	✓	✓
2560x1600p@60RB	✓	✓	✓	X	✓	✓
2048x1080p@24/25/30	✓	✓	✓	X	✓	✓
2048x1080p@50/60	✓	✓	✓	X	✓	✓
3840x2160p@24/25/30	✓	✓	✓	X	✓	✓
3840x2160p@50/60 (4:2:0)	✓	✓	✓	X	✓	✓
3840x2160p@24, HDR10	✓	✓	✓	X	✓	8-bit

BYPASS OUTPUT

SUPPORTED RESOLUTIONS (HZ)	INPUT				BYPASS OUTPUT	
	HDMI	HDBT	USBC	VGA	HDMI	HDBT
3840x2160p@50/60 (4:2:0), HDR10	✓	✓	✓	X	✓	8-bit
3840x2160p@50/60	✓	✓	✓	X	✓	✓
4096x2160p@24/25/30	✓	✓	✓	X	✓	✓
4096x2160p@50/60 (4:2:0)	✓	✓	✓	X	✓	X
4096x2160p@24, HDR10	✓	✓	✓	X	✓	8-bit
4096x2160p@50/60 (4:2:0), HDR10	✓	✓	✓	X	✓	8-bit
4096x2160p@50/60	✓	✓	✓	X	✓	X

SCALED OUTPUT

SUPPORTED RESOLUTIONS (HZ)	SCALED OUTPUT	
	HDMI	HDBT
720x400p@70/85	X	X
640x480p@60/72/75/85	60	60
720x480i@60	X	X
720x480p@60	✓	✓
720x576i@50	X	X
720x576p@50	✓	✓
800x600p@56/60/72/75/85	60	60
848x480p@60	X	X
1024x768p@60/70/75/85	60	60
1152x864p@75	X	X
1280x720p@50/60	✓	✓
1280x768p@60/75/85	60	60
1280x800p@60/75/85	60	60
1280x960p@60/85	X	X
1280x1024p@60/75/85	60	60
1360x768p@60	✓	✓
1366x768p@60	X	X
1400x1050p@60	✓	✓
1440x900p@60/75	60	60
1600x900p@60RB	X	X

SUPPORTED RESOLUTIONS (HZ)	SCALED OUTPUT	
	HDMI	HDBT
1600x1200p@60	✓	✓
1680x1050p@60	✓	✓
1920x1080i@50/60	X	X
1920x1080p@24/25/30	✓	✓
1920x1080p@50/60	✓	✓
1920x1200p@60RB	✓	✓
2560x1440p@60RB	X	X
2560x1600p@60RB	✓	✓
2048x1080p@24/25/30	X	X
2048x1080p@50/60	X	X
3840x2160p@24/25/30	✓	✓
3840x2160p@50/60 (4:2:0)	✓	✓
3840x2160p@24, HDR10	X	X
3840x2160p@50/60 (4:2:0), HDR10	X	X
3840x2160p@50/60	✓	X
4096x2160p@24/25/30	✓	✓
4096x2160p@50/60 (4:2:0)	✓	✓
4096x2160p@24, HDR10	X	X
4096x2160p@50/60 (4:2:0), HDR10	X	X
4096x2160p@50/60	✓	X

DIGITAL AUDIO

HDMI INPUT / OUTPUT DISPLAYPORT INPUT USB-C INPUT HDBASET™ OUTPUT	
LPCM	
Max Channels	2 Channels (8 Channels in bypass)
Sampling Rate (kHz)	32, 44.1, 48, 88.2, 96, 176.4, 192
Bitstream (Bypass Only)	
Supported Formats	Standard & High-Definition

ANALOG AUDIO

ANALOG INPUT (3.5MM)	
Max Audio Level	1Vrms
Impedance	10kΩ
Type	Unbalanced
MIC INPUT	
Max Audio Level	50Vrms
Impedance	6.8kΩ
Type	Unbalanced
ANALOG OUTPUT (5-PIN TERMINAL BLOCK)	
Max Audio Level	4Vrms
THD+N	< -84dB@0dBFS 1kHz (A-wt)
SNR	> 104dB@0dBFS
Frequency Response	< ±3dB@20Hz~20kHz
Crosstalk	< -70dB@10kHz
Impedance	499Ω
Type	Balanced
AMPLIFIED ANALOG OUTPUT (2-PIN TERMINAL BLOCK PAIR)	
Max Audio Level	20W
THD+N	< -66dB@20W 1kHz (A-wt)
SNR	> 96dB@0dBFS
Frequency Response	< ±3dB@20Hz~20kHz
Crosstalk	< -70dB@10kHz
Impedance	4Ω
Type	Balanced

CABLE SPECIFICATIONS

CABLE LENGTH	1080P		4K30	4K60
	8-bit	12-bit	8-bit (4:4:4)	8-bit (4:4:4)
High Speed HDMI Cable				
HDMI Input	~16 ft / 5M	~16 ft / 5M	~16 ft / 5M	~6.5 ft / 2M
HDMI Output	~16 ft / 5M	~16 ft / 5M	~16 ft / 5M	~6.5 ft / 2M
VGA Cable				
VGA Input	~6.5 ft / 2M		X	
Ethernet Cable				
CAT5e/6	~328 ft / 100M	X		
CAT6A/7	~328 ft / 100M	X		

Bandwidth Category Examples:

■ 1080p (FHD Video)

- Up to 1080p@60Hz, 12-bit color
- Data rates lower than 5.3Gbps or below 225MHz TMDS clock

■ 4K30 (UHD Video)

- 4K@24/25/30Hz & 4K@50/60Hz (4:2:0), 8-bit color
- Data rates higher than 5.3Gbps or above 225MHz TMDS clock but below 10.2Gbps

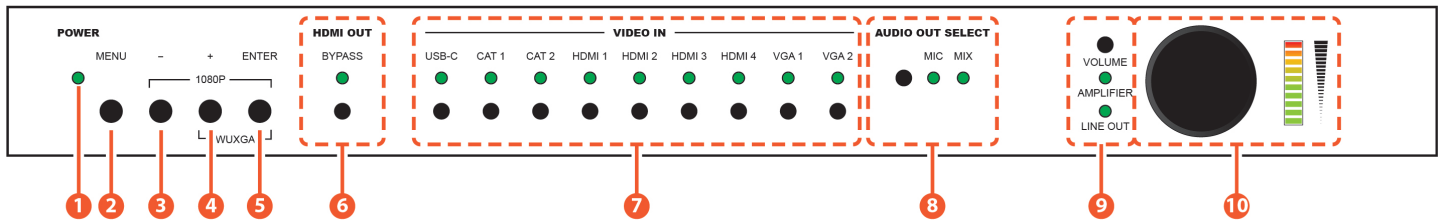
■ 4K60 (UHD+ Video)

- 4K@50/60Hz (4:4:4, 8-bit)
- 4K@50/60Hz (4:2:0, 10-bit HDR)
- Data rates higher than 10.2Gbps

HDBASET™ FEATURES

HDBASET™ FEATURE SET	TRANSMITTER
Video & Audio Extension	Supported
LAN Extension	Supported
Send power to Receiver	Supported (PoH)
Accept power from Receiver	Unsupported
IR Extension	Supported
RS-232 Extension	Supported
USB 2.0 Extension	Unsupported

FRONT PANEL



1 POWER LED: This LED will illuminate to indicate the unit is on and receiving power.

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

3 MINUS (-) BUTTON: Press to move down or adjust selections within OSD menus.

4 PLUS (+) BUTTON: Press to move up or adjust selections within OSD menus.

Note: Pressing the “+” button when not in a menu will toggle the video freeze feature.

5 ENTER BUTTON: Press to confirm a selection within the OSD or to go deeper into a menu item.

Note: Pressing “ENTER” and “+” together will reset the output resolution to WUXGA (1920x1200@60Hz). Pressing “ENTER” and “-” together will reset the output resolution to 1080p@60Hz.

6 HDMI OUT BYPASS BUTTON & LED: Press this button to enable or disable the HDMI video Bypass function. When bypass is enabled, the LED will illuminate.

7 VIDEO IN BUTTONS & LEDS: Press any of these buttons to switch immediately to the corresponding input. An LED will illuminate to indicate which source is currently selected.

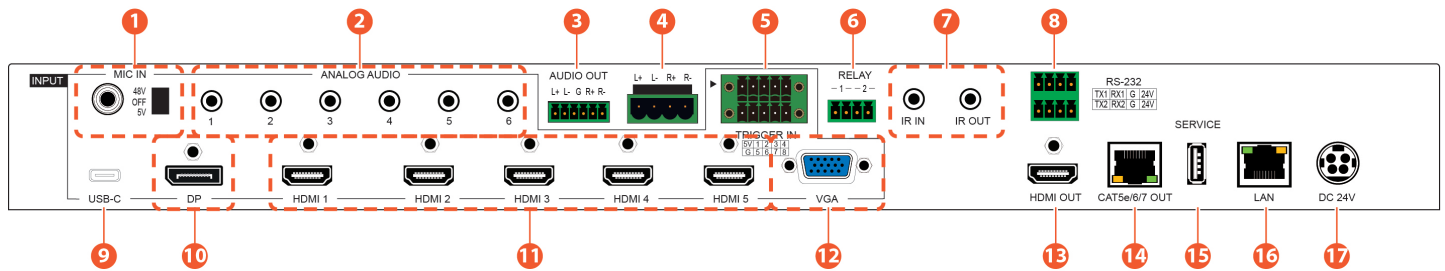
8 AUDIO OUT SELECT BUTTON & LEDS: Press this button to select the microphone mix mode of the unit. The LED will illuminate to indicate the current mix mode. When both LEDs are off, the mixer is disabled.

Note: Activating Mixer On mode, or MIC Only mode will automatically disable HDMI Out Bypass mode.

9 VOL. BUTTON & LEDS: Press this button to select which audio output’s volume is controlled by the volume knob. When both LEDs are off, the knob controls the HDMI audio output (LPCM 2.0 only).

10 VOL. ROTARY KNOB & LEDS: Rotating the knob increases or decreases the currently selected audio output’s volume level. The LED bar will change according to the current level. Pressing in on the knob toggles the audio mute function.

REAR PANEL



1 MIC IN PORT & 48V/OFF/5V SWITCH: Connect to a standard microphone using a 6.35mm plug. Set the switch based on the phantom power requirements of the connected microphone.

Note: If no phantom power is required, this switch should remain in the “Off” position to avoid potential damage to connected equipment.

2 ANALOG AUDIO INPUT 1~6 PORTS: Connect to the analog stereo output of a device such as an audio player or PC.

Note: By default, Analog Audio 1 is paired with the VGA input.

3 AUDIO OUT 5-PIN TERMINAL BLOCK: Connect to powered speakers or an amplifier for analog stereo audio output.

4 AUDIO OUT L/R 2-PIN TERMINAL BLOCKS: Connect to unpowered 4Ω speakers for analog stereo audio output. Up to 20W of power is provided to each speaker.

5 TRIGGER IN 10-PIN TERMINAL BLOCK: Connect to the Trigger Control Keypad (Optional) or any device with trigger switch functionality such as window security alarms, motion detectors, door switches, etc. Each of the 8 triggers will activate an assigned unit function when triggered.

Note: A minimum of 5V DC is required to activate a trigger.

6 RELAY 1~2 2-PIN TERMINAL BLOCKS: Connect to devices that can be powered and controlled via a DC 0~24V/5A relay connection such as a curtain, projection screen, or lights.

7 IR IN PORT: Connect to an IR Extender to receive local IR control signals and extend them to devices connected to the other end of the HDBaseT™ connection. Ensure that the remote being used is within direct line-of-sight of the IR Extender.

IR OUT PORT: Connect to an IR Blaster to transmit IR signals from the other end of the HDBaseT™ connection to devices within direct line-of-sight of the IR Blaster.

Note: IR can only be routed across a single HDBaseT™ connection at a time. The HDBaseT™ connection to use is defined within the WebGUI or OSD menu.

8 RS-232 1 4-PIN TERMINAL BLOCK 1 (TOP): 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. RS-232 2 4-pin Terminal Block (Bottom): Connect to a PC, laptop, or serial controllable device with a 3-pin adapter cable for the extension of RS-232 signals between this unit and the designated HDBaseT™ connection.

Note: The 24 volt pins are included to provide power to a dedicated external control product and should NOT be used when connecting a standard RS-232 device.

9 USB-C INPUT PORT: Connect to USB Type-C video source equipment such as a PC or laptop.

Note: Not all devices with USB Type-C ports can support video output. Please verify that the device supports video output from the USB Type-C port before connecting it.

10 DISPLAY INPUT PORT: Connect to DisplayPort source equipment such as a PC or laptop.

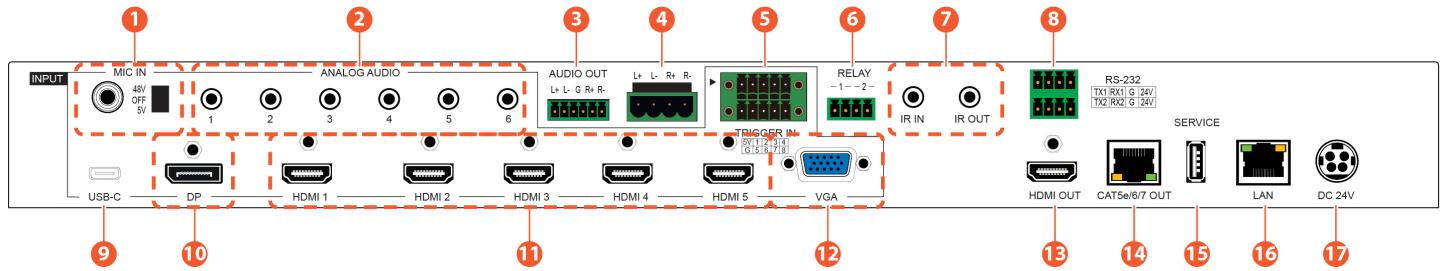
Note: For 4K sources, use of cable that supports DisplayPort 1.2 or higher is strongly recommended.

11 HDMI INPUT 1~5 PORTS: Connect to HDMI source equipment such as media players, game consoles, or set-top boxes. DVI sources are supported with the use of an HDMI to DVI adapter.

12 VGA INPUT PORT: Connect to VGA source equipment such as PCs or laptops.

13 HDMI OUT PORT: Connect to an HDMI TV, monitor, or amplifier for digital video and audio output.

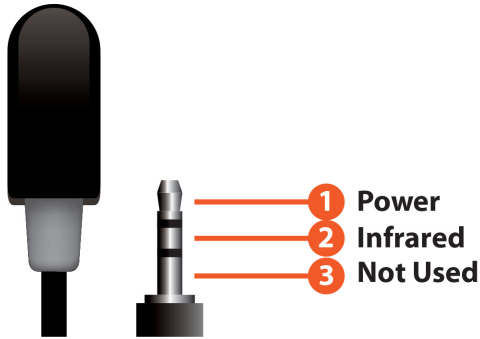
BACK PANEL



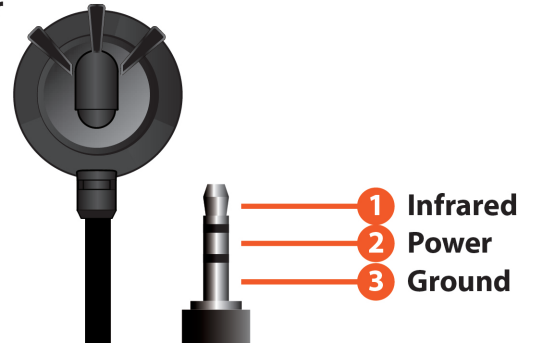
- 14 CAT5E/6/7 OUT PORT:** Connect to a compatible HDBaseT™ receiver with a single CAT5e/6/7 cable for transmission of all data signals. PoH will also be supplied to a connected compatible PD receiver. (ANI-7251RX)
- 15 SERVICE PORT:** This port is reserved for firmware update use only.
- 16 LAN PORT:** Connect directly, or through a network switch, to your PC/ laptop to control the unit via Telnet/WebGUI and to extend the network across the HDBaseT™ connection.
- 17 DC24V 4-PIN DIN PORT:** Plug the 24V DC power adapter into this port and connect it to an AC wall outlet for power.

IR CABLE PINOUTS

IR Blaster Cable



IR Extender Cable

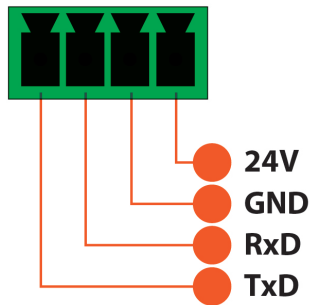


RS-232 PINOUT AND DEFAULTS

Serial Port Default Settings	
Baud Rate	19200bps
Data Bits	8bit
Parity Bits	None
Stop Bits	1bit
Flow Control	None

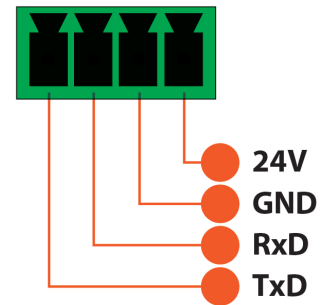
RS-232 Port 1 (Unit control)

4-pin Terminal Block



RS-232 Port 2 (HDBaseT™ extension)

4-pin Terminal Block



Note: The 24 volt pins (pin 1) are included to provide power to a dedicated external control product and should NOT be used when connecting a standard RS-232 device.

OSD MENU

MAIN MENU
Video
Picture
Audio
OSD
Ethernet
EDID
System
Factory
Information

All 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.

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

VIDEO

1. HDMI OUT BYPASS: Enable or disable the video output bypass mode. When bypass is enabled, HDR video and bitstream audio can be supported, however it will disable the unit’s scaling and video adjustment functions.

Note: This setting affects both the HDMI and HDBaseT™ outputs. This setting does not enable audio bypass.

2. OUTPUT ROUTE: Select the video input to route to both outputs.

3. OUTPUT RESOLUTION: Select the output resolution to use when HDMI bypass is disabled. Selecting a “**Native**” resolution option will make the unit automatically select an output resolution based on the detected EDID of the connected display.

Note: Not active when HDMI bypass mode is enabled.

4. ASPECT: Select the aspect ratio to use when outputting the source. “**Full**” stretches the source to fill the output resolution, regardless of the original aspect ratio, while “**Best Fit**” will always attempt to retain the original source’s correct aspect ratio by adding black bars if necessary. “**Follow In**” centers the source on the screen, without any scaling (1:1 pixel reproduction).

Note: Not active when HDMI bypass mode is enabled.

5. NO SIGNAL COLOR: Select the color to output when no input signal is detected.

6. BLANK: Enable or disable blanking the video output.

Note: Not available when HDMI bypass mode is enabled.

7. FREEZE: Enable or disable freezing the video output.

Note: Not available when HDMI bypass mode is enabled.

8. AUTO SETTING:

- **Auto Sync Off:** Sets the amount of time to continue outputting sync with the free run color if there is no live source and no operations have been executed on the unit. Setting this to “**OFF**” forces the unit to always output sync.

- **Auto Input:** Enable or disable automatically switching to any newly detected source.

9. HDCP SETTING: Provides control over the HDCP behavior of each input.

Note: The VGA inputs are not listed as they cannot support HDCP.

2ND LEVEL	3RD LEVEL	4TH LEVEL
HDMI Out Bypass	OFF	
	On	
Output Route	USB-C	
	DP	
	HDMI 1	

VIDEO

2ND LEVEL	3RD LEVEL	4TH LEVEL
Output Route	HDMI 2	
	HDMI 3	
	HDMI 4	
	HDMI 5	
	VGA	
Output Resolution	NATIVE HDMI	
	Native HDBT	
	640x480@60	
	800x600@60	
	1024x768@60	
	1280x768@60	
	1360x768@60	
	1280x720@60	
	1280x800@60	
	1280x1024@60	
	1440x900@60	
	1400x1050@60	
	1680x1050@60	
	1600x1200@60	
	1920x1080@60	
	1920x1200@60RB	
	2560x1600@60RB	
	720x480p	
	720x576p	
	1280x720p50	
	1280x720p60	
	1920x1080p24	
	1920x1080p25	
	1920x1080p30	
	1920x1080p50	
	1920x1080p60	
	3840x2160p24	
3840x2160p25		
3840x2160p30		

VIDEO

2ND LEVEL	3RD LEVEL	4TH LEVEL
Output Resolution	3840x2160p50	
	3840x2160p60	
	3840x2160p50(420)	
	3840x2160p60(420)	
	4096x2160p24	
	4096x2160p25	
	4096x2160p30	
	4096x2160p50	
	4096x2160p60	
	4096x2160p50(420)	
	4096x2160p60(420)	
	Aspect	
Pan Scan		
Aspect	Letterbox	
	Under 1	
	Under 2	
	Follow In	
	Overscan	
	Full	
No Signal Color	BLACK	
	White	
	Blue	
	Red	
	Green	
Blank	OFF	
	On	
Freeze	OFF	
	On	
Auto Setting	Auto Sync Off	OFF
		30s
		60s
	Auto Input	OFF
		Auto Switch

VIDEO

2ND LEVEL	3RD LEVEL	4TH LEVEL
HDCP Setting	HDCP On USB-C	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On DP	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On HDMI 1	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On HDMI 2	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On HDMI 3	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On HDMI 4	Refer to Source
		REFER TO DISPLAY
		Support Off
	HDCP On HDMI 5	Refer to Source
		REFER TO DISPLAY
		Support Off

PICTURE

1. **COLOR GAIN R/G/B:** Set the red, green, and blue color gain level of the scaled output.
2. **COLOR OFFSET R/G/B:** Set the red, green, and blue color offset level of the scaled output.
3. **BRIGHTNESS / CONTRAST:** Set the overall brightness and contrast of the scaled output image.
4. **FINE TUNE HDMI (DIGITAL SOURCES ONLY):**
 - **Hue:** Set the hue shift of the scaled output image.
 - **Saturation:** Set the color saturation level of the scaled output image.
 - **Sharpness:** Set the amount of sharpness processing to apply to the scaled output image.
 - **NR:** Set the aggressiveness of the digital noise reduction processing when applied to the scaled output image. Selecting **“Off”** disables all noise reduction processing.
5. **FINE TUNE PC (VGA SOURCES ONLY):**
 - **PC Auto:** Provides a way to manually activate the auto detection of the VGA source's settings. Select **“Execute”** to run the auto set.
 - **PC H/V Position:** Set the horizontal and vertical position for the current VGA input.
 - **PC Clock:** Set the PC clock setting for the current VGA input.
 - **PC Phase:** Set the PC phase setting for the current VGA input.
 - **PC Reset:** Reset all PC picture settings back to their factory defaults. Select **“Execute”** to activate the reset.

PICTURE

6. RESET PICTURE: Reset all picture settings back to their factory defaults. Select “**Execute**” to activate the reset.

2ND LEVEL	3RD LEVEL	4TH LEVEL	
Color Gain R	0~1023 (512)		
Color Gain G	0~1023 (512)		
Color Gain B	0~1023 (512)		
Color Offset R	0~1023 (512)		
Color Offset G	0~1023 (512)		
Color Offset B	0~1023 (512)		
Brightness	0~60 (30)		
Contrast	0~60 (30)		
Fine Tune HDMI (Digital sources only)	Hue	0~60 (30)	
	Saturation	0~60 (30)	
	Sharpness	0~60 (30)	
	NR		OFF
			Low
			Middle
			High
		Auto	
Fine Tune PC (Analog sources only)	PC Auto	EXECUTE	
	PC H Position	0~250	
	PC V Position	0~250	
	PC Clock	0~250	
	PC Phase	0~255	
	PC Reset		NO
			Execute
Reset Picture	NO		
	Execute		

AUDIO

1. HDMI OUT BYPASS: Enable or disable HDMI audio bypass mode. When enabled, all audio will automatically behave as if in “**Follow Video**” mode and bitstream audio can be supported.

Note: This bypass setting affects audio only.

2. AUDIO ROUTING: Select the audio routing behavior of the unit.

- **Follow User:** Audio routing will follow the selections made in the “**Follow User Setting**” section.
- **Follow Video:** All digital sources will use their native embedded audio content. VGA 1 will use the Analog 1 audio input and VGA 2 will use the Analog 2 audio input.
- **Fixed Analog 1~6:** Forces all video sources to be paired with the selected analog audio source.

AUDIO

Note: When HDMI Out Bypass for audio is enabled, all audio will automatically behave as if in “Follow Video” mode.

3. FOLLOW USER SETTING: Options for defining the audio routing to use when the “Follow User” mode is enabled. Select the preferred Follow User source for each input.

4. OUTPUT MIXER: Set the microphone mixing mode of the unit.

- **Mixer Off:** Disable the audio mixer.
- **Mixer On:** Enable the audio mixer. Audio from the current source and the microphone will be mixed together.
- **MIC Only:** Output only the microphone audio source. This mode will override all other audio selections.

Note: Activating Mixer On mode, or MIC Only mode will automatically disable HDMI Out Bypass mode.

5. MIC GAIN: Sets the microphone input’s volume level when the microphone is an active audio source (mixed or unmixed).

6. HDMI/ANALOG / SPEAKER OUT VOLUME: Set the volume level for each audio output type.

Note: LPCM 2.0 sources only. Not active when HDMI audio Out Bypass is enabled.

7. HDMI/ANALOG / SPEAKER OUT MUTE: Enable or disable muting the audio of each output type.

2ND LEVEL	3RD LEVEL	4TH LEVEL
HDMI Out Bypass	OFF	
	On	
Audio Routing	Follow User	
	FOLLOW VIDEO	
	Fixed Analog 1	
	Fixed Analog 2	
	Fixed Analog 3	
	Fixed Analog 4	
	Fixed Analog 5	
	Fixed Analog 6	
Follow User Setting	Audio On USB-C	EMBEDDED
		Analog 1
		Analog 2
		Analog 3
		Analog 4
		Analog 5
		Analog 6
	Audio On DP	[Same options as for USB-C]
	Audio On HDMI 1	[Same options as for USB-C]
	Audio On HDMI 2	[Same options as for USB-C]
	Audio On HDMI 3	[Same options as for USB-C]
	Audio On HDMI 4	[Same options as for USB-C]
	Audio On HDMI 5	[Same options as for USB-C]
Audio On VGA 1	ANALOG 1	
	Analog 2	

AUDIO

2ND LEVEL	3RD LEVEL	4TH LEVEL
Follow User Setting	Audio On VGA	Analog 3
		Analog 4
		Analog 5
		Analog 6
Output Mixer	MIXER OFF	
	Mixer On	
	Mic Only	
Mic Gain	0~100 (0)	
HDMI Out Volume	0~100 (85)	
Analog Out Volume	0~100 (85)	
Speaker Out Volume	0~100 (85)	
HDMI/HDBT Out Mute	OFF	
	On	
Analog Out Mute	OFF	
	On	
Speaker Out Mute	OFF	
	On	

OSD

- H/V POSITION:** Controls the position of the OSD menu.
- TRANSPARENCY:** Set the transparency level of the OSD menu's background. The available range is from Level 0 (fully opaque) to Level 8 (fully transparent).
- OSD MENU TIMEOUT:** Set how long to wait before automatically closing the OSD menu if there is no user activity. The timeout can be set to up to 60 seconds, or disabled completely.
- DISPLAY:** Set the behavior of the OSD informational display. Selecting "Info" will show the information display for a short time after a source or display change. Selecting "Off" will disable the info display. Selecting "On" will always show the info display.

2ND LEVEL	3RD LEVEL	4TH LEVEL
H Position	0~100 (50)	
V Position	0~100 (50)	
Transparency	1~8 (1)	
OSD Menu Timeout	OFF	
	5s	
	10s	
	15s	
	20s	

OSD

2ND LEVEL	3RD LEVEL	4TH LEVEL
OSD Menu Timeout	25s	
	30s	
	35s	
	40s	
	45s	
	50s	
	55s	
	60s	
Display	INFO	
	Off	
	On	

ETHERNET

1. IP MODE: Set the unit to Static or DHCP mode. When DHCP mode is selected, all IP address information will be assigned automatically by the local DHCP server. When Static is selected, the IP address, netmask and gateway must be set manually and additional menu items become available.

2. STATIC IP SETTING: The unit's static IP address, netmask, and gateway address can be set here. Press the "Enter" button to begin editing the address and use the "+" and "-" buttons to adjust each value. Press the "Enter" button to store the current number segment and move to the next segment.

Note: The unit's default static IP address is 192.168.1.50.

3. IP/MAC: Displays the unit's MAC address and current IP address.

2ND LEVEL	3RD LEVEL	4TH LEVEL
IP Mode	STATIC	
	DHCP	
Static IP Setting	Static IP	0~255 (192)
		0~255 (168)
		0~255 (1)
		0~255 (50)
	Mask	0~255 (255)
		0~255 (255)
		0~255 (0)
		0~255 (0)
	Gate	0~255 (192)
		0~255 (168)
		0~255 (1)

ETHERNET

2ND LEVEL	3RD LEVEL	4TH LEVEL
Static IP Setting	Gate	0~255 (50)
IP	[Current IP address]	
MAC	[Unit's MAC address]	

EDID

1. EDID SELECTION: Select the EDID to use with each input.

Note: In most cases, assigning a new EDID to an input will cause the affected input to briefly blink out while the source adapts to the new information.

2ND LEVEL	3RD LEVEL	4TH LEVEL
EDID On USB-C	DEFAULT FHD 2CH	
	Default FHD MCh	
	Default UHD 2Ch	
	Default UHD MCh	
	Default UHD+ 2Ch	
	Default UHD+ MCh	
	Default VGA	
	User 1	
	User 2	
	Sink HDMI	
	Sink HDBT	
EDID On DP	[Same options as for USB-C]	
EDID On HDMI 1	[Same options as for USB-C]	
EDID On HDMI 2	[Same options as for USB-C]	
EDID On HDMI 3	[Same options as for USB-C]	
EDID On HDMI 4	[Same options as for USB-C]	
EDID On HDMI 5	[Same options as for USB-C]	
EDID On VGA 1	Default FHD 2Ch	
	Default FHD MCh	
	Default UHD 2Ch	
	Default UHD MCh	
	Default UHD+ 2Ch	
	Default UHD+ MCh	
	DEFAULT VGA	
	User 1	

EDID

1. EDID SELECTION: Select the EDID to use with each input.

Note: In most cases, assigning a new EDID to an input will cause the affected input to briefly blink out while the source adapts to the new information.

2ND LEVEL	3RD LEVEL
EDID On USB-C	DEFAULT FHD 2CH
	Default FHD MCh
	Default UHD 2Ch
	Default UHD MCh
	Default UHD+ 2Ch
	Default UHD+ MCh
	Default VGA
	User 1
	User 2
	Sink HDMI
Sink HDBT	
EDID On HDBT 1	[Same options as for USB-C]
EDID On HDBT 2	[Same options as for USB-C]
EDID On HDMI 1	[Same options as for USB-C]
EDID On HDMI 2	[Same options as for USB-C]
EDID On HDMI 3	[Same options as for USB-C]
EDID On HDMI 4	[Same options as for USB-C]
EDID On VGA 1	User 2
	Sink HDMI
	Sink HDBT

SYSTEM

1. RELAY 1~2: Manually open or close Relay 1 and Relay 2. Selecting “**ON**” closes the relay, selecting “**OFF**” opens it.

2ND LEVEL	3RD LEVEL
Relay 1	OFF
	On
Relay 2	OFF
	On

FACTORY

1. RESET ALL: Selecting “Execute” will reset all of the unit’s settings back to their factory defaults.

2. FW UPDATE FROM USB: Provides a way to update the unit’s firmware. Insert a USB thumb drive, with a valid firmware file (*.bin format) in the root directory, into the unit’s USB service port then select this option. After the update is complete the unit will automatically reboot.

2ND LEVEL	3RD LEVEL
Reset All	NO
	Execute
FW Update From USB	NO
	Execute

INFORMATION

1. INFORMATION: This screen displays information about the unit’s current state, input and output status, as well as the current firmware version.

2ND LEVEL	3RD LEVEL
Video HDMI Out Bypass	[Current System Settings]
Output Route	
Output Resolution	
Audio HDMI Out Bypass	
Output Route	
Output Mixer	
IP	
Version	[Current Firmware Version]

DEVICE DISCOVERY

Please obtain the “**Device Discovery**” software from your authorized dealer and save it in a directory where you can easily find it. Connect the unit and your PC/Laptop to the same active network and execute the “**Device Discovery**” software. Click on “**Find Devices on Network**” and a list of devices connected to the local network will show up indicating their current IP address.

Note: The unit’s default IP address is 192.168.1.50.

By clicking on one of the listed devices you will be presented with the network details of that particular device.

1. IP MODE: If you choose, you can alter the static IP network settings for the device, or switch the unit into DHCP mode to automatically obtain proper network settings from a local DHCP server. To switch to DHCP mode, please select DHCP from the IP mode drop-down, then click “**Save**” followed by “**Reboot**”.

2. WEBGUI HOTKEY: Once you are satisfied with the network settings, you may use them to connect via Telnet or WebGUI. The network information window provides a convenient link to launch the WebGUI directly.

WEBGUI OVERVIEW

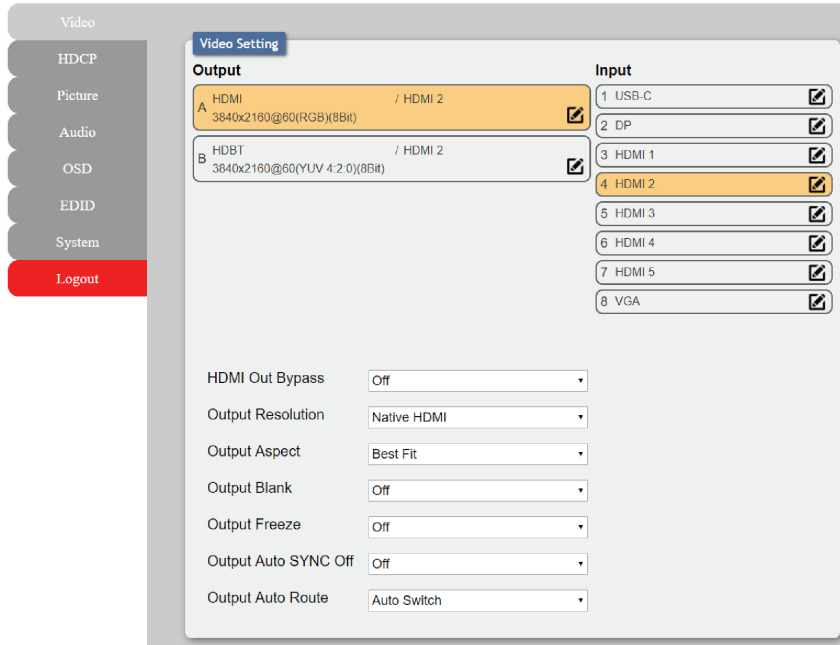
After connecting to the WebGUI’s address in a web browser, the login screen will appear. Please enter the appropriate user name and password then click “**Submit**” to log in.

Note: The default user name and password is “**admin**”.

On the left side of the browser you will see the following menu tabs where all primary functions of the unit are controllable via the built in WebGUI. The individual functions will be introduced in the following sections.

Clicking the red “**Logout**” tab will automatically log the currently connected user out of the WebGUI and return to login page.

VIDEO TAB



This page provides video routing settings, I/O renaming options and control over the video output signal's format and behavior. To begin assigning a new video route, please click an output button and then click on the button of the preferred input port. As you select each button they will change their color to orange. The new route will become active immediately after selecting the input port and the routing information displayed on the buttons will change accordingly.

Note: Both outputs are linked together, so selecting a source for one will automatically change the source for the other.

1. OUTPUT: Buttons for selecting the output (A & B) to route A/V Inputs to. Details about the output names and currently selected Input are also displayed here. To change the name of an output, click on the edit icon ().

2. INPUT: Buttons for selecting the input to route to the selected output. Detail about the input names is also displayed here. To change the name of an output, click on the edit icon ().

3. ADDITIONAL SETTINGS:

- **HDMI Out Bypass:** Enable or disable the video output bypass mode. When bypass is enabled, HDR video and bitstream audio can be supported, however it will disable the unit's scaling and video adjustment functions.

Note: This setting affects both the HDMI and HDBaseT™ outputs. This setting does not enable audio bypass.

- **Output Resolution:** Selects the output resolution to use when HDMI bypass is disabled. Selecting a “Native” resolution option will make the unit automatically select an output resolution based on the detected EDID of the connected display.

Note: Not active when HDMI bypass mode is enabled.

- **Output Aspect:** Selects the aspect ratio to use when outputting the source. “Full” stretches the source to fill the output resolution, regardless of the original aspect ratio, while “Best Fit” will always attempt to retain the original source's correct aspect ratio by adding black bars if necessary. “Follow In” centers the source on the screen, without any scaling (1:1 pixel reproduction).

Note: Not active when HDMI bypass mode is enabled.

- **Output Blank:** Enable or disable blanking the video output.

Note: Not available when HDMI bypass mode is enabled.

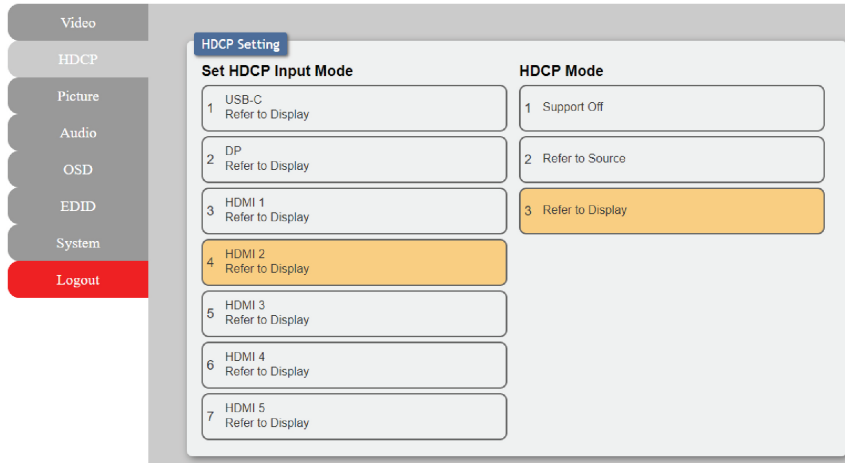
- **Output Freeze:** Enable or disable freezing the video output.

Note: Not available when HDMI bypass mode is enabled.

- **Output Auto Sync Off:** Sets the amount of time to continue outputting sync with the free run color if there is no live source and no operations have been executed on the unit. Setting this to “OFF” forces the unit to always output sync.

- **Output Auto Route:** Enable or disable automatically switching to any newly detected source.

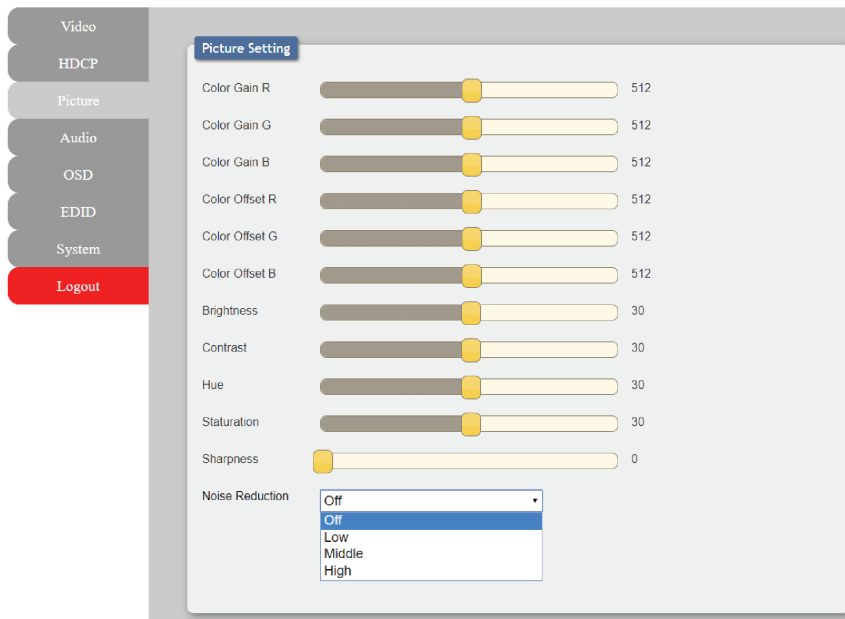
HDCP TAB



Provides control over the HDCP behavior of each input. To enable or disable HDCP support on one or more inputs, select the preferred inputs on the left, and then select the HDCP mode on the right. The change will occur immediately.

Note: The VGA inputs are not listed as they cannot support HDCP.

PICTURE TAB



This tab provides controls over the scaled video output's color, brightness, contrast. When a digital source is selected hue, saturation, sharpness and noise reduction are also controllable. When a VGA input is selected, the available controls will change and auto set, H/V position, clock and phase will become adjustable instead.

Note: These features are not active when HDMI bypass mode is enabled.

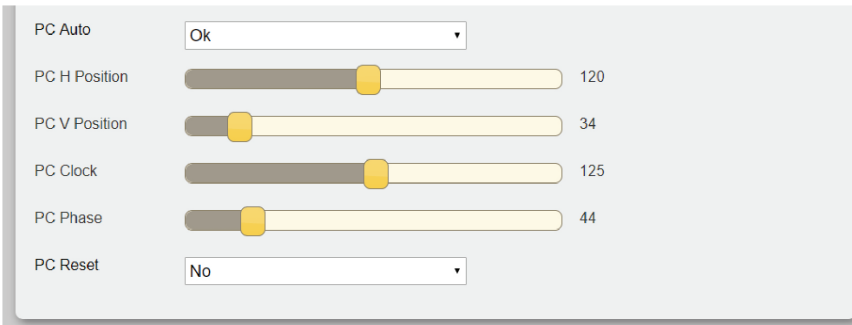
1. PICTURE SETTINGS (GLOBAL):

- **Color Gain R/G/B:** These sliders provide control over the red, green, and blue color gain level of the scaled output.
- **Color Offset R/G/B:** These sliders provide control over the red, green, and blue color offset level of the scaled output.
- **Brightness:** Provides control over the overall brightness of the scaled output image.
- **Contrast:** Provides control over the overall contrast of the scaled output image.

2. PICTURE SETTINGS (DIGITAL SOURCES):

- **Hue:** Provides control over the hue shift of the scaled output image.
- **Saturation:** Provides control over the color saturation level of the scaled output image.
- **Sharpness:** Provides control over the amount of sharpness processing to apply to the scaled output image.
- **Noise Reduction:** Provides control over the aggressiveness of the digital noise reduction processing when applied to the scaled output image. Selecting “Off” disables all noise reduction processing.

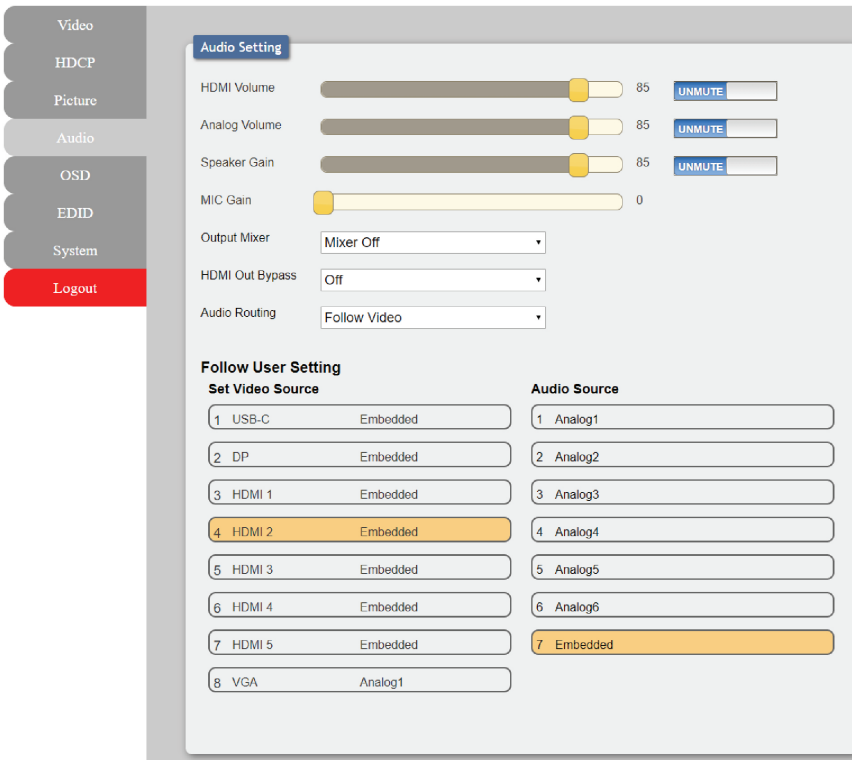
PICTURE TAB



3. PICTURE SETTINGS (VGA SOURCE):

- **PC Auto:** Provides a way to manually activate the auto detection of the VGA source's settings.
- **PC H/V Position:** Set the horizontal and vertical position setting for the current VGA input.
- **PC Clock:** Set the PC clock setting for the current VGA input.
- **PC Phase:** Set the PC phase setting for the current VGA input.
- **PC Reset:** Reset all PC picture settings back to their factory defaults.

AUDIO TAB



This tab provides control over how audio is routed within the unit as well as control over audio mixing, individual output volume and the microphone's gain level.

1. AUDIO SETTINGS:

- **HDMI Volume & Mute:** Set the volume level, or mute the audio, for the HDMI and HDBaseT™ audio outputs.
Note: Not active when HDMI audio Out Bypass is enabled.
- **Analog Volume & Mute:** Set the volume level, or mute the audio, for the unamplified (5-pin terminal block) analog audio output.
Note: LPCM 2.0 sources only.
- **Speaker Gain & Mute:** Set the volume level, or mute the audio, for the amplified (2x 2-pin terminal blocks) analog audio output.
Note: LPCM 2.0 sources only.
- **MIC Gain:** Sets the microphone input's volume level when the microphone is an active audio source (mixed or unmixed).
- **Output Mixer:** Set the microphone mixing mode of the unit
 - **Mixer Off:** Disable the audio mixer.

- **Mixer On:** Enable the audio mixer. Audio from the current source and the microphone will be mixed together.
- **MIC Only:** Output only the microphone audio source. This mode will override all other audio selections.
Note: Activating Mixer On mode, or MIC Only mode will automatically disable HDMI Out Bypass mode.
- **HDMI Out Bypass (audio only):** Enable or disable HDMI audio bypass mode. When enabled, all audio will automatically behave as if in "Follow Video" mode and bitstream audio can be supported.
Note: This bypass setting affects audio only.
- **Audio Routing:** Use the dropdown to select the audio routing behavior of the unit.
 - **Follow User:** Audio routing will follow the selections made in the "Follow User Setting" section.
 - **Follow Video:** All digital sources will use their native embedded audio content. VGA 1 will use the Analog 1 audio input and VGA 2 will use the Analog 2 audio input.
 - **Fixed Analog 1~6:** Forces all video sources to be paired with the selected analog audio source.

AUDIO TAB

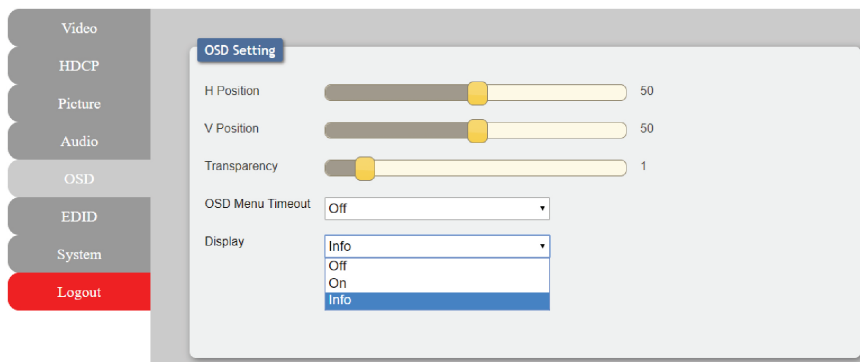
Note: When HDMI audio Out Bypass is enabled, all audio will automatically behave as if in **“Follow Video”** mode.

2. FOLLOW USER SETTING: These routing settings are only enforced when Audio Routing has been set to **“Follow User”**.

Note: Not active when HDMI audio Out Bypass is enabled.

■ **Set Video and Audio Source:** Buttons for defining the audio routing to use when the **“Follow User”** mode is enabled. To begin assigning a new audio route, select one or more video sources on the left, then select the audio source to route with them on the right. As you select each button they will change their color to orange. The new routing information will be displayed on the Video Source buttons after selection.

OSD TAB



This tab provides controls over the appearance of the unit’s informational OSD and OSD menu.

1. H/V POSITION: Controls the position of the OSD menu.

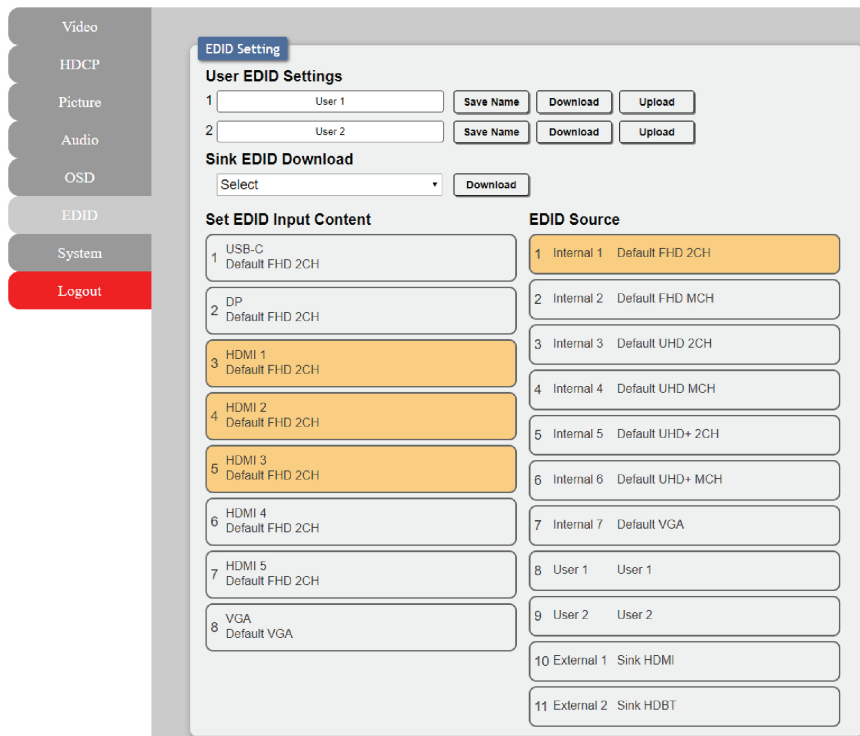
2. TRANSPARENCY: Controls the transparency level of the OSD menu’s background. The available range is from Level 0 (fully opaque) to Level 8 (fully transparent).

3. OSD MENU TIMEOUT: Controls how long to wait before automatically closing the OSD menu if there is no user activity. The timeout can be set to up to 60 seconds, or disabled completely.

4. DISPLAY: Controls the behavior of the OSD

informational display. Selecting **“Info”** will show the information display for a short time after a source or display change. Selecting **“Off”** will disable the info display. Selecting **“On”** will always show the info display.

EDID TAB



This tab provides control over the EDID settings of all inputs. This unit provides the option of seven standard EDIDs, two sink sourced EDIDs and two user uploaded EDIDs that can be assigned to each input port individually. The names of the two user uploaded EDIDs can be changed if desired.

1. USER EDID SETTINGS:

■ **Save Name:** To change the name of a User EDID, type the new name in the space provided, then click on the **“Save Name”** button.

■ **Download:** To save an existing User EDID to your local PC please press the **“Download”** button next to the EDID you would like to save. Depending on your browser settings you will either be asked where to save the downloaded file, or the file will be transferred directly to the default download location on your PC.

■ **Upload:** To upload a new User EDID, please click the **“Upload”** button next to the User EDID Settings item you would like to change. An EDID Upload window will appear, allowing you to locate and upload the preferred EDID file (*.bin format) from a local PC. Once the correct file has been

selected, please click the **“Upload”** button in the window, and the file will be transferred to the unit.

EDID TAB

2. SINK EDID DOWNLOAD: To save the EDID from one of the connected displays to your local PC, select the appropriate sink from the dropdown list then press the **“Download”** button. Depending on your browser settings you will either be asked where to save the downloaded file, or the file will be transferred directly to the default download location on your PC.

3. SET EDID INPUT CONTENT: This section provides controls for assigning EDID to the unit’s inputs. Click on the preferred input(s) on the left and then select the EDID on the right and the change will occur immediately. Multiple inputs can be selected at once, if desired.

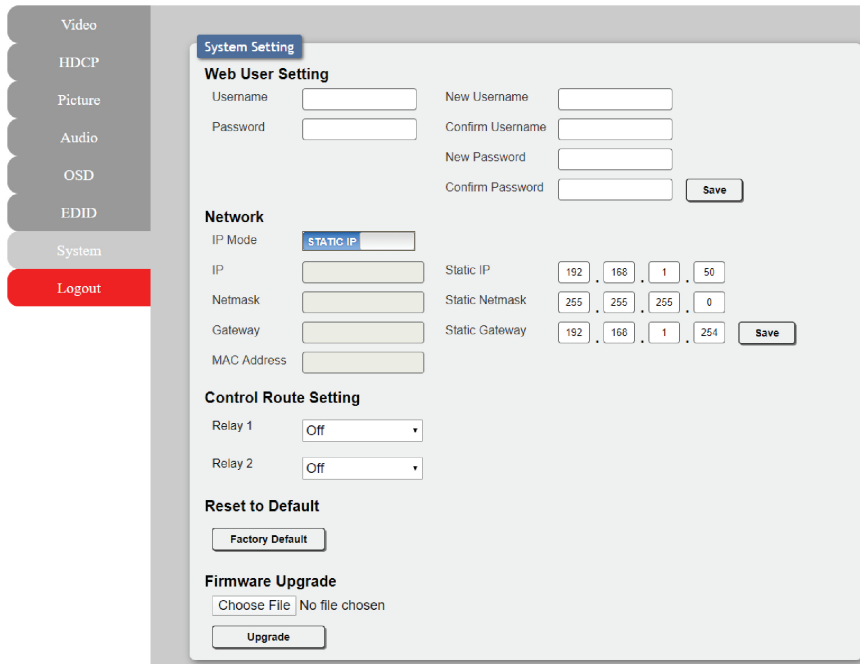
Note: In most cases, assigning a new EDID to an input will cause the affected input to briefly blink out while the source adapts to the new information.

This unit provides the following 7 default EDIDs:

UNIT’S DEFAULT EDIDS	
FHD 2CH	1920x1080p@60Hz (4.95Gbps) & 8-bit color, LPCM 2.0
FHD MCH	1920x1080p@60Hz (4.95Gbps) & 8-bit color, LPCM 7.1 & Bitstream
UHD 2CH	3840x2160p@30Hz (10.2Gbps) & Deep Color (8/10/12-bit), LPCM 2.0
UHD MCH	3840x2160p@30Hz (10.2Gbps) & Deep Color (8/10/12-bit), LPCM 7.1 & Bitstream
UHD+ 2CH	3840x2160p@60Hz (18Gbps) & Deep Color (8/10/12-bit), LPCM 2.0
UHD+ MCH	3840x2160p@60Hz (18Gbps) & Deep Color (8/10/12-bit), LPCM 7.1 & Bitstream
VGA	1920x1080p@60Hz (148MHz) & 8-bit color

Note: In some rare cases it is possible for custom or external EDIDs to cause compatibility issues with certain sources. If this happens, it is recommended to switch to one of the 7 default EDIDs for maximum compatibility.

SYSTEM TAB



Click on the **“System”** tab to make changes to various system settings. From this tab you can change the WebGUI login username and password as well as configure the RS-232/IR HDBaseT™ routing. Finally, this tab provides buttons to reset the unit to factory defaults and to update the firmware.

1. WEB USER SETTING: This section allows for the login password to be changed.

Note: The default user name and password is **“admin”**.

2. NETWORK: IP mode may be switched between Static IP or DHCP. In Static IP mode the IP, netmask and gateway addresses may be manually set. When in DHCP mode, the unit will attempt to connect to a local DHCP server and obtain IP, netmask and gateway addresses automatically. Please press **“Save”** after making any changes to the IP configuration or mode.

Note: If the IP address is changed then the IP address required for WebGUI/Telnet access will also change accordingly.

3. CONTROL ROUTE SETTING: These settings control the unit’s 2 relay ports as well as defining the HDBaseT™ routing to use for the RS-232 and IR ports on the unit.

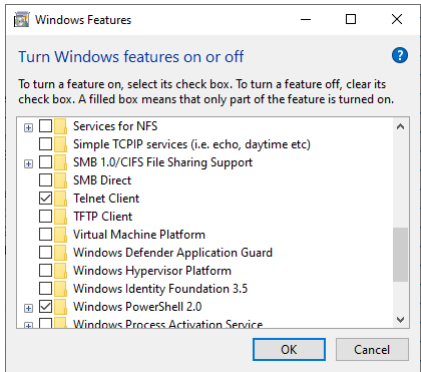
- **Relay 1 & 2:** Manually open or close Relay 1 and Relay 2. Selecting **“ON”** closes the relay, selecting **“OFF”** opens it.
- **RS232:** Use the dropdown to select which HDBaseT™ port the local RS-232 port should route across. Available choices are: HDBT Out, HDBT In1, and HDBT In2.

SYSTEM TAB

- **IR:** Use the dropdown to select which HDBaseT™ port the local IR ports should route across. Available choices are: HDBT Out, HDBT In1, and HDBT In2.
- 4. RESET TO DEFAULT:** Press the “**ALL Reset**” button to reset the unit to its factory default state. After the reset is complete, the unit will reboot automatically.
- 5. FIRMWARE UPGRADE:** To update the unit’s firmware, click the “**Choose File**” button to open the file selection window and then select the firmware update file (*.bin format) located on your local PC. After selecting the file, click the “**Upgrade**” button to begin the firmware update process. After the upgrade is complete, the unit will reboot automatically.

TELNET CONTROL

Before attempting to use Telnet control, please ensure that both the unit and the PC/laptop are connected to the same active network.

To Access Telnet	
Windows 7	Click START , type “cmd” in the search field and press ENTER .
Windows 10	<ol style="list-style-type: none"> 1. Open “Control Panel”. 2. Open “Programs and Features”. 3. Select the “Turn Windows features on or off ” option.  <ol style="list-style-type: none"> 4. Check the “Telnet Client” box. 5. Click “OK“. A box will appear that says “Windows Features” and “Searching for required files”. When complete, the Telnet client should be installed in Windows.
In Mac OS X	Click Go > Applications > Utilities > Terminal .

Once in the Command Line Interface (CLI) type “telnet” followed by the IP address of the unit (and the port number if it is non-standard) and then hit “Enter”. This will connect us to the unit we wish to control.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>telnet 192.168.1.50 23
```

- Note 1: If the IP address is changed then the IP address required for Telnet access will also change accordingly.*
- Note 2: The default IP address is 192.168.1.50.*

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS
HELP ↵	Show the full command list.
? ↵	Show the full command list.
HELP N1 ↵	Show details about the specified command. N1 = {Command name}
GET FW VER ↵	Show the unit’s current firmware version.
GET COMMAND VER ↵	Show the unit’s current command version.
GET MAC ADDR ↵	Show the unit’s MAC address.
GET MODEL NAME ↵	Show the unit’s model name.
GET MODEL TYPE ↵	Show the index number of the unit’s product type.

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS
SET FACTORY DEFAULT ↵	Reset the unit to the factory defaults.
SET SYSTEM REBOOT ↵	Reboot the unit.
SET IP MODE STATIC ↵	Set the IP address assignment mode to static.
SET IP MODE DHCP ↵	Set the IP address assignment mode to DHCP.
SET IP MODE N1 ↵	Set the IP address assignment mode. Available values for N1 : 0 [Static IP Mode] 1 [DHCP Mode]
GET IP MODE ↵	Show the current IP address assignment mode.
GET IPADDR ↵	Show the unit's current IP address.
SET STATIC IPADDR N1 ↵	Set the unit's static IP address. N1 = X.X.X.X [X = 0 ~ 255, IP address]
SET STATIC NETMASK N1 ↵	Set the unit's static netmask. N1 = X.X.X.X [X = 0 ~ 255, netmask]
GET STATIC NETMASK ↵	Show the unit's current netmask.
SET STATIC GATEWAY N1 ↵	Set the unit's static gateway address. N1 = X.X.X.X [X = 0 ~ 255, gateway address]
GET STATIC GATEWAY ↵	Show the unit's current gateway address.
SET WEBGUI USERNAME N1 ↵	Set the WebGUI login username. N1 = {Name} [16 characters max]
GET WEBGUI USERNAME ↵	Show the current WebGUI login username.
SET WEBGUI PASSWORD N1 ↵	Set the WebGUI login password. N1 = {Name} [16 characters max]
GET WEBGUI PASSWORD ↵	Show the current WebGUI login password.
SET OUT A ROUTE N1 ↵	Route the specified input to both outputs. Available values for N1 : 1 [USB-C input] 5 [HDMI input 3] 2 [DisplayPort input] 6 [HDMI input 4] 3 [HDMI input 1] 7 [HDMI input 5] 4 [HDMI input 2] 8 [VGA input]
GET OUT A ROUTE ↵	Show the current input routed to both outputs.
SET OUT AUTO MODE N1 ↵	Set the auto switching behavior of the unit. Available values for N1 : 0 [Off] 1 [Auto switch]
GET OUT AUTO MODE ↵	Show the current auto switching mode of the unit.
GET IN N1 TIMING ↵	Show the index number of the current resolution detected on the specified input. Available values for N1 : 1 [USB-C input] 5 [HDMI input 3] 2 [DisplayPort input] 6 [HDMI input 4] 3 [HDMI input 1] 7 [HDMI input 5] 4 [HDMI input 2] 8 [VGA input]

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS																																										
GET IN N1 TIMING STRING ↵	Show the index number and description of the current resolution detected on the specified input. Available values for N1 : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">5</td> <td>[HDMI input 3]</td> </tr> <tr> <td>1 [USB-C input]</td> <td>6 [HDMI input 4]</td> </tr> <tr> <td>2 [DisplayPort input]</td> <td>7 [HDMI input 5]</td> </tr> <tr> <td>3 [HDMI input 1]</td> <td>8 [VGA input]</td> </tr> <tr> <td>4 [HDMI input 2]</td> <td></td> </tr> </table>	5	[HDMI input 3]	1 [USB-C input]	6 [HDMI input 4]	2 [DisplayPort input]	7 [HDMI input 5]	3 [HDMI input 1]	8 [VGA input]	4 [HDMI input 2]																																	
5	[HDMI input 3]																																										
1 [USB-C input]	6 [HDMI input 4]																																										
2 [DisplayPort input]	7 [HDMI input 5]																																										
3 [HDMI input 1]	8 [VGA input]																																										
4 [HDMI input 2]																																											
GET IN PORT NUMBER ↵	Show the total number of inputs on the unit																																										
GET OUT PORT NUMBER ↵	Show the total number of outputs on the unit																																										
SET OUT A TIMING N1 ↵	Set the output resolution to use for both outputs. Available values for N1 : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">20</td> <td>[1280x720p60]</td> </tr> <tr> <td>0 [Native HDMI]</td> <td>21 [1920x1080p24]</td> </tr> <tr> <td>1 [Native HDBaseT™]</td> <td>22 [1920x1080p25]</td> </tr> <tr> <td>2 [640x480@60]</td> <td>23 [1920x1080p30]</td> </tr> <tr> <td>3 [800x600@60]</td> <td>24 [1920x1080p50]</td> </tr> <tr> <td>4 [1024x768@60]</td> <td>25 [1920x1080p60]</td> </tr> <tr> <td>5 [1280x768@60]</td> <td>26 [3840x2160p24]</td> </tr> <tr> <td>6 [1360x768@60]</td> <td>27 [3840x2160p25]</td> </tr> <tr> <td>7 [1280x720@60]</td> <td>28 [3840x2160p30]</td> </tr> <tr> <td>8 [1280x800@60]</td> <td>29 [3840x2160p50]</td> </tr> <tr> <td>9 [1280x1024@60]</td> <td>30 [3840x2160p60]</td> </tr> <tr> <td>10 [1440x900@60]</td> <td>31 [3840x2160p50(4:2:0)]</td> </tr> <tr> <td>11 [1400x1050@60]</td> <td>32 [3840x2160p60(4:2:0)]</td> </tr> <tr> <td>12 [1680x1050@60]</td> <td>33 [4096x2160p24]</td> </tr> <tr> <td>13 [1600x1200@60]</td> <td>34 [4096x2160p25]</td> </tr> <tr> <td>14 [1920x1080@60]</td> <td>35 [4096x2160p30]</td> </tr> <tr> <td>15 [1920x1200@60RB]</td> <td>36 [4096x2160p50]</td> </tr> <tr> <td>16 [2560x1600@60RB]</td> <td>37 [4096x2160p60]</td> </tr> <tr> <td>17 [720x480p]</td> <td>38 [4096x2160p50(4:2:0)]</td> </tr> <tr> <td>18 [720x576p]</td> <td>39 [4096x2160p60(4:2:0)]</td> </tr> <tr> <td>19 [1280x720p50]</td> <td></td> </tr> </table>	20	[1280x720p60]	0 [Native HDMI]	21 [1920x1080p24]	1 [Native HDBaseT™]	22 [1920x1080p25]	2 [640x480@60]	23 [1920x1080p30]	3 [800x600@60]	24 [1920x1080p50]	4 [1024x768@60]	25 [1920x1080p60]	5 [1280x768@60]	26 [3840x2160p24]	6 [1360x768@60]	27 [3840x2160p25]	7 [1280x720@60]	28 [3840x2160p30]	8 [1280x800@60]	29 [3840x2160p50]	9 [1280x1024@60]	30 [3840x2160p60]	10 [1440x900@60]	31 [3840x2160p50(4:2:0)]	11 [1400x1050@60]	32 [3840x2160p60(4:2:0)]	12 [1680x1050@60]	33 [4096x2160p24]	13 [1600x1200@60]	34 [4096x2160p25]	14 [1920x1080@60]	35 [4096x2160p30]	15 [1920x1200@60RB]	36 [4096x2160p50]	16 [2560x1600@60RB]	37 [4096x2160p60]	17 [720x480p]	38 [4096x2160p50(4:2:0)]	18 [720x576p]	39 [4096x2160p60(4:2:0)]	19 [1280x720p50]	
20	[1280x720p60]																																										
0 [Native HDMI]	21 [1920x1080p24]																																										
1 [Native HDBaseT™]	22 [1920x1080p25]																																										
2 [640x480@60]	23 [1920x1080p30]																																										
3 [800x600@60]	24 [1920x1080p50]																																										
4 [1024x768@60]	25 [1920x1080p60]																																										
5 [1280x768@60]	26 [3840x2160p24]																																										
6 [1360x768@60]	27 [3840x2160p25]																																										
7 [1280x720@60]	28 [3840x2160p30]																																										
8 [1280x800@60]	29 [3840x2160p50]																																										
9 [1280x1024@60]	30 [3840x2160p60]																																										
10 [1440x900@60]	31 [3840x2160p50(4:2:0)]																																										
11 [1400x1050@60]	32 [3840x2160p60(4:2:0)]																																										
12 [1680x1050@60]	33 [4096x2160p24]																																										
13 [1600x1200@60]	34 [4096x2160p25]																																										
14 [1920x1080@60]	35 [4096x2160p30]																																										
15 [1920x1200@60RB]	36 [4096x2160p50]																																										
16 [2560x1600@60RB]	37 [4096x2160p60]																																										
17 [720x480p]	38 [4096x2160p50(4:2:0)]																																										
18 [720x576p]	39 [4096x2160p60(4:2:0)]																																										
19 [1280x720p50]																																											
GET OUT A TIMING ↵	Show the index number of the current resolution used by both outputs.																																										
GET OUT A TIMING STRING ↵	Show the description string of the current resolution used by both outputs.																																										
GET IN SOURCE LIST ↵	List the port type of all inputs on the unit.																																										
GET OUT TIMING LIST ↵	List all available output resolutions with their local index numbers.																																										
SET OUT A CONTRAST N1 ↵	Set the scaled output's contrast level. N1 = 0~60 [Contrast level]																																										
GET OUT A CONTRAST ↵	Show the contrast level when the output is scaled.																																										
SET OUT A BRIGHTNESS N1 ↵	Set the scaled output's brightness level. N1 = 0~60 [Brightness level]																																										
GET OUT A BRIGHTNESS ↵	Show the brightness level when the output is scaled.																																										
SET OUT A SATURATION N1 ↵	Set the scaled output's saturation level. N1 = 0~60 [Saturation level]																																										
GET OUT A SATURATION ↵	Show the saturation level when the output is scaled.																																										
SET OUT A HUE N1 ↵	Set the scaled output's hue value. N1 = 0~60 [Hue value]																																										

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS
GET OUT A HUE ↵	Show the hue value when the output is scaled.
SET OUT A SHARPNESS N1 ↵	Set the scaled output's sharpness level. N1 = 0~63 [Sharpness level]
GET OUT A SHARPNESS ↵	Show the sharpness level when the output is scaled.
SET OUT A NR N1 ↵	Set the amount of noise reduction to apply when the output is scaled. Available values for N1: 0 [Off] 2 [Middle] 1 [Low] 3 [High]
GET OUT A NR ↵	Show the current amount of noise reduction applied when the output is scaled.
SET OUT A ASPECT RATIO N1 ↵	Set the aspect ratio of the video shown when the output is scaled. Available values for N1: 1 [Overscan] 5 [Letterbox] 2 [Full] 6 [Underscan 1] 3 [Best fit] 7 [Underscan 2] 4 [Pan & scan] 8 [Follow input]
GET OUT A ASPECT RATIO ↵	Show the currently set aspect ratio for the video shown when the output is scaled.
GET OUT ASPECT RATIO LIST ↵	List all available aspect ratio options.
SET OUT A AUTO SYNC OFF N1 ↵	Enable or disable the Auto Sync Off function and set the timeout length. Available values for N1: 0 [Disabled] 1 [30 seconds] 2 [60 seconds]
GET OUT A AUTO SYNC OFF ↵	Show the current Auto Sync Off setting.
SET OUT A R GAIN N1 ↵	Set the scaled output's red gain level. N1 = 0~1023 [Red gain level]
GET OUT A R GAIN ↵	Show the scaled output's current red gain level.
SET OUT A G GAIN N1 ↵	Set the scaled output's green gain level. N1 = 0~1023 [Green gain level]
GET OUT A G GAIN ↵	Show the scaled output's current green gain level.
SET OUT A B GAIN N1 ↵	Set the scaled output's blue gain level. N1 = 0~1023 [Blue gain level]
GET OUT A B GAIN ↵	Show the scaled output's current blue gain level.
SET OUT A R OFFSET N1 ↵	Set the scaled output's red offset. N1 = 0~1023 [Red offset]
GET OUT A R OFFSET ↵	Show the scaled output's current red offset.
SET OUT A G OFFSET N1 ↵	Set the scaled output's green offset. N1 = 0~1023 [Green offset]
GET OUT A G OFFSET ↵	Show the scaled output's current green offset.
SET OUT A B OFFSET N1 ↵	Set the scaled output's blue offset. N1 = 0~1023 [Blue offset]
GET OUT A B OFFSET ↵	Show the scaled output's current blue offset.
SET IN 8 PHASE N1 ↵	Set the PC phase value for the VGA input. N1 = 0~255 [PC phase]

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS														
GET IN 8 PHASE ↵	Show the current PC phase value for the VGA input.														
SET IN 8 CLOCK N1 ↵	Set the PC clock value for the VGA input. N1 = 0~250 [PC clock]														
GET IN 8 CLOCK ↵	Show the current PC clock value for the VGA input.														
SET IN 8 HPOSITION N1 ↵	Set the PC horizontal position for the VGA input. N1 = 0~250 [Horizontal position]														
GET IN 8 HPOSITION ↵	Show the current PC horizontal position for the VGA input.														
SET IN 8 VPOSITION N1 ↵	Set the PC vertical position for the VGA input. N1 = 0~250 [Horizontal position]														
GET IN 8 VPOSITION ↵	Show the current PC vertical position for the VGA input.														
SET OUT A VIDEO MODE N1 ↵	Enable or disable the video output bypass mode. Available values for N1: 0 [Video bypass disabled] 1 [Video bypass enabled]														
GET OUT A VIDEO MODE ↵	Show the current video output bypass mode state.														
SET FACTORY VGA DEFAULT ↵	Reset the VGA input settings to the factory defaults.														
SET VGA AUTO ADJUST MODE ↵	Activate the auto detection of the current VGA source's parameters.														
SET OUT A BLANK ↵	Enable or disable blanking the video output Available values for N1: 0 [Video output normal] 1 [Video output blanked]														
SET OUT A BLANK N1 ↵	Show the current video output blanking state.														
SET OUT A FREEZE N1 ↵	Enable or disable freezing the video output. Available values for N1: 0 [Video output normal] 1 [Video output frozen]														
GET OUT A FREEZE ↵	Show the current video output freeze state.														
SET OUT A OSD TIMER N1 ↵	Set the OSD menu's timeout value. Available values for N1:														
	<table border="0"> <tr> <td>6</td> <td>[30 seconds]</td> </tr> <tr> <td>7</td> <td>[35 seconds]</td> </tr> <tr> <td>8</td> <td>[40 seconds]</td> </tr> <tr> <td>9</td> <td>[45 seconds]</td> </tr> <tr> <td>10</td> <td>[50 seconds]</td> </tr> <tr> <td>11</td> <td>[55 seconds]</td> </tr> <tr> <td>12</td> <td>[60 seconds]</td> </tr> </table>	6	[30 seconds]	7	[35 seconds]	8	[40 seconds]	9	[45 seconds]	10	[50 seconds]	11	[55 seconds]	12	[60 seconds]
6	[30 seconds]														
7	[35 seconds]														
8	[40 seconds]														
9	[45 seconds]														
10	[50 seconds]														
11	[55 seconds]														
12	[60 seconds]														
GET OUT A OSD TIMER ↵	Show the current OSD menu timeout value.														
SET OUT A OSD VPOSITION N1 ↵	Set the vertical position of the OSD menu. N1 = 0~100 [Vertical position]														
GET OUT A OSD VPOSITION ↵	Show the current vertical position of the OSD menu.														
SET OUT A OSD HPOSITION N1 ↵	Set the horizontal position of the OSD menu. N1 = 0~100 [Horizontal position]														
GET OUT A OSD HPOSITION ↵	Show the current vertical position of the OSD menu.														
SET OUT A OSD TRANSPARENCY LEVEL N1 ↵	Set the transparency level of the OSD menu. N1 = 1~8 [Transparency level]														

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS								
GET OUT A OSD TRANSPARENCY LEVEL ↵	Show the current transparency level of the OSD menu.								
SET OUT A OSD DISPLAY N1 ↵	<p>Enable/disable the info OSD, or set it to display briefly.</p> <p>Available values for N1:</p> <ul style="list-style-type: none"> 0 [Always off] 1 [Always on] 2 [Display briefly] 								
GET OUT A OSD DISPLAY ↵	Show the current info OSD state.								
SET OUT A OSD DISPLAY N1 ↵	<p>Enable/disable the info OSD, or set it to display briefly.</p> <p>Available values for N1:</p> <ul style="list-style-type: none"> 0 [Always off] 1 [Always on] 2 [Display briefly] 								
GET OUT A OSD DISPLAY ↵	Show the current info OSD state.								
SET AUDIO OUT N1 MUTE N2 ↵	<p>Enable or disable muting the specified audio output.</p> <p>Available values for N1:</p> <ul style="list-style-type: none"> A [HDMI audio output] B [HDBaseT™ audio output] C [Standard analog audio output] D [Amplified analog audio output] <p>Available values for N2:</p> <ul style="list-style-type: none"> 0 [Mute disabled] 1 [Mute enabled] <p>Note: The HDMI and HDBaseT™ outputs share their settings.</p>								
GET AUDIO OUT N1 MUTE ↵	<p>Show the current mute state of the specified output.</p> <p>Available values for N1:</p> <ul style="list-style-type: none"> A [HDMI audio output] B [HDBaseT™ audio output] C [Standard analog audio output] D [Amplified analog audio output] 								
SET AUDIO OUT ALL MUTE N1 ↵	<p>Enable or disable muting on all audio outputs.</p> <p>Available values for N1:</p> <ul style="list-style-type: none"> 0 [Mute disabled] 1 [Mute enabled] 								
SET AUDIO OUT A ROUTE N1 ↵	<p>Set the audio source selection behavior of the unit.</p> <p>Available values for N1:</p> <table style="width: 100%; border: none;"> <tr> <td>0 [Follow user mode]</td> <td>4 [Analog audio input 3]</td> </tr> <tr> <td>1 [Follow video mode]</td> <td>5 [Analog audio input 4]</td> </tr> <tr> <td>2 [Analog audio input 1]</td> <td>6 [Analog audio input 5]</td> </tr> <tr> <td>3 [Analog audio input 2]</td> <td>7 [Analog audio input 6]</td> </tr> </table>	0 [Follow user mode]	4 [Analog audio input 3]	1 [Follow video mode]	5 [Analog audio input 4]	2 [Analog audio input 1]	6 [Analog audio input 5]	3 [Analog audio input 2]	7 [Analog audio input 6]
0 [Follow user mode]	4 [Analog audio input 3]								
1 [Follow video mode]	5 [Analog audio input 4]								
2 [Analog audio input 1]	6 [Analog audio input 5]								
3 [Analog audio input 2]	7 [Analog audio input 6]								
GET AUDIO OUT A ROUTE ↵	Show the unit's current audio source selection behavior.								
SET AUDIO OUT N1 VOLUME N2 ↵	<p>Set the volume level of the specified output's audio.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Available values for N1:</td> <td>C [Standard analog audio output]</td> </tr> <tr> <td>A [HDMI audio output]</td> <td>D [Amplified analog audio output]</td> </tr> <tr> <td>B [HDBaseT™ audio output]</td> <td></td> </tr> </table> <p>N2 = 0~100 [Volume level]</p> <p>Note: The HDMI and HDBaseT™ outputs share their settings.</p>	Available values for N1 :	C [Standard analog audio output]	A [HDMI audio output]	D [Amplified analog audio output]	B [HDBaseT™ audio output]			
Available values for N1 :	C [Standard analog audio output]								
A [HDMI audio output]	D [Amplified analog audio output]								
B [HDBaseT™ audio output]									

SERIAL AND TELNET COMMANDS

COMMAND	DESCRIPTION AND PARAMETERS
GET AUDIO OUT N1 VOLUME ↵	Show the current volume level of the specified output's audio. Available values for N1: A [HDMI audio output] B [HDBaseT™ audio output] C [Standard analog audio output] D [Amplified analog audio output]
GET AUDIO IN TYPE LIST ↵	List all available audio input sources.
GET AUDIO OUT TYPE LIST ↵	List all available audio output destinations.
SET AUDIO OUT MIXER N1 ↵	Set the state of the unit's audio mixer function. Available values for N1: OFF [Mixer disabled] ON [Mixer enabled] MIC [Microphone only]
GET AUDIO OUT MIXER ↵	Show the current state of the unit's audio mixer.
SET AUDIO OUT A MODE N1 ↵	Enable or disable the HDMI/HDBaseT™ audio output bypass mode. Available values for N1: 0 [Audio bypass disabled] 1 [Audio bypass enabled]
GET AUDIO OUT A MODE ↵	Show the current HDMI/HDBaseT™ audio output bypass mode state.
SET VIDEO IN N1 AUDIO ROUTE N2 ↵	Set the audio source to use with the specified video input when Follow User Mode is enabled. Available values for N1: 1 [USB-C input] 2 [DisplayPort input] 3 [HDMI input 1] 4 [HDMI input 2] 5 [HDMI input 3] 6 [HDMI input 4] 7 [HDMI input 5] 8 [VGA input] Available values for N2: 0 [Analog audio input 1] 1 [Analog audio input 2] 2 [Analog audio input 3] 3 [Analog audio input 4] 4 [Analog audio input 5] 5 [Analog audio input 6] 6 [Embedded audio]
GET VIDEO IN N1 AUDIO ROUTE ↵	Show the audio source currently assigned to the specified video input to be used when Follow User Mode is enabled. Available values for N1: 1 [USB-C input] 2 [HDBaseT™ input 1] 3 [HDBaseT™ input 2] 4 [HDMI input 1] 5 [HDMI input 3] 6 [HDMI input 4] 7 [HDMI input 5] 8 [VGA input]
SET AUDIO MIXER IN 1 VOLUME N1 ↵	Set the mixer's gain level for the microphone input. N1 = 0~100 [Microphone gain]
GET AUDIO MIXER IN 1 VOLUME ↵	Show the current microphone input mixer gain level.
SET IN N1 EDID N2 ↵	Set the EDID to use on the specified input. Available values for N1: 1 [USB-C input] 2 [DisplayPort input] 3 [HDMI input 1] 4 [HDMI input 2] 5 [HDMI input 3] 6 [HDMI input 4] 7 [HDMI input 5] 8 [VGA input]

SERIAL AND TELNET COMMANDS

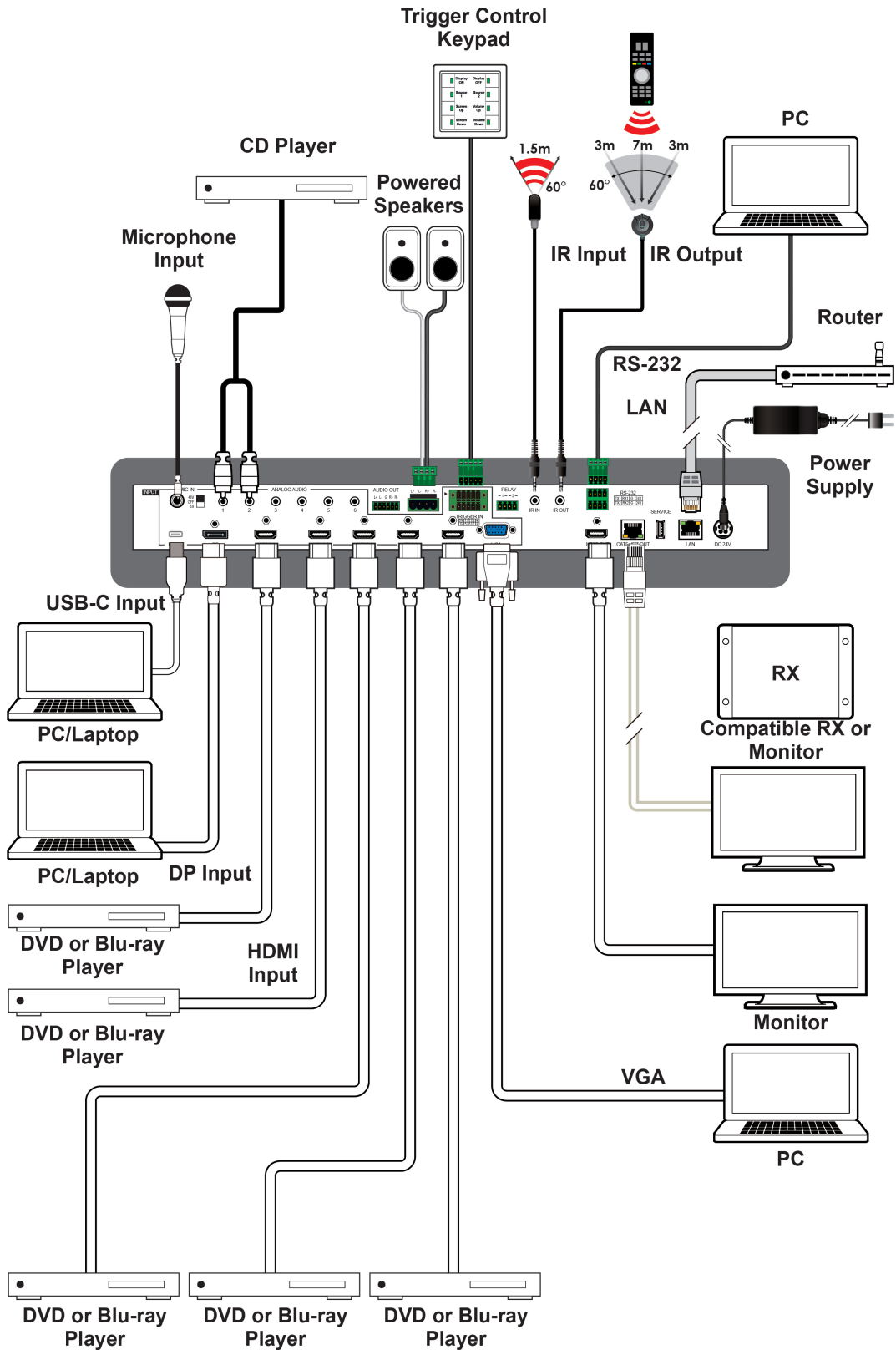
COMMAND	DESCRIPTION AND PARAMETERS																								
SET IN N1 EDID N2 ↵	<p>Available values for N2:</p> <table> <tr><td>0</td><td>[Default FHD 2CH]</td><td>5</td><td>[Default UHD+ MCH]</td></tr> <tr><td>1</td><td>[Default FHD MCH]</td><td>6</td><td>[Default VGA]</td></tr> <tr><td>2</td><td>[Default UHD 2CH]</td><td>7</td><td>[User EDID 1]</td></tr> <tr><td>3</td><td>[Default UHD MCH]</td><td>8</td><td>[User EDID 2]</td></tr> <tr><td>4</td><td>[Default UHD+ 2CH]</td><td>9</td><td>[HDMI sink]</td></tr> <tr><td></td><td></td><td>10</td><td>[HDBaseT™ sink]</td></tr> </table>	0	[Default FHD 2CH]	5	[Default UHD+ MCH]	1	[Default FHD MCH]	6	[Default VGA]	2	[Default UHD 2CH]	7	[User EDID 1]	3	[Default UHD MCH]	8	[User EDID 2]	4	[Default UHD+ 2CH]	9	[HDMI sink]			10	[HDBaseT™ sink]
0	[Default FHD 2CH]	5	[Default UHD+ MCH]																						
1	[Default FHD MCH]	6	[Default VGA]																						
2	[Default UHD 2CH]	7	[User EDID 1]																						
3	[Default UHD MCH]	8	[User EDID 2]																						
4	[Default UHD+ 2CH]	9	[HDMI sink]																						
		10	[HDBaseT™ sink]																						
GET IN N1 EDID ↵	<p>Show the EDID currently being used on the specified input.</p> <p>Available values for N1:</p> <table> <tr><td>1</td><td>[USB-C input]</td><td>5</td><td>[HDMI input 3]</td></tr> <tr><td>2</td><td>[DisplayPort input]</td><td>6</td><td>[HDMI input 4]</td></tr> <tr><td>3</td><td>[HDMI input 1]</td><td>7</td><td>[HDMI input 5]</td></tr> <tr><td>4</td><td>[HDMI input 2]</td><td>8</td><td>[VGA input]</td></tr> </table>	1	[USB-C input]	5	[HDMI input 3]	2	[DisplayPort input]	6	[HDMI input 4]	3	[HDMI input 1]	7	[HDMI input 5]	4	[HDMI input 2]	8	[VGA input]								
1	[USB-C input]	5	[HDMI input 3]																						
2	[DisplayPort input]	6	[HDMI input 4]																						
3	[HDMI input 1]	7	[HDMI input 5]																						
4	[HDMI input 2]	8	[VGA input]																						
GET IN EDID LIST ↵	List all available EDID selections.																								
SET IN N1 HDCP MODE N2 ↵	<p>Set the HDCP behavior of the specified input.</p> <table> <tr> <td>Available values for N1:</td> <td>Available values for N2:</td> </tr> <tr> <td>1 [USB-C input]</td> <td>0 [HDCP support disabled]</td> </tr> <tr> <td>2 [DisplayPort input]</td> <td>1 [HDCP support enabled]</td> </tr> <tr> <td>3 [HDMI input 1]</td> <td></td> </tr> <tr> <td>4 [HDMI input 2]</td> <td></td> </tr> <tr> <td>5 [HDMI input 3]</td> <td></td> </tr> <tr> <td>6 [HDMI input 4]</td> <td></td> </tr> <tr> <td>7 [HDMI input 5]</td> <td></td> </tr> </table>	Available values for N1 :	Available values for N2 :	1 [USB-C input]	0 [HDCP support disabled]	2 [DisplayPort input]	1 [HDCP support enabled]	3 [HDMI input 1]		4 [HDMI input 2]		5 [HDMI input 3]		6 [HDMI input 4]		7 [HDMI input 5]									
Available values for N1 :	Available values for N2 :																								
1 [USB-C input]	0 [HDCP support disabled]																								
2 [DisplayPort input]	1 [HDCP support enabled]																								
3 [HDMI input 1]																									
4 [HDMI input 2]																									
5 [HDMI input 3]																									
6 [HDMI input 4]																									
7 [HDMI input 5]																									
GET IN N1 HDCP MODE ↵	<p>Show the current HDCP behavior used by the specified input.</p> <table> <tr> <td>Available values for N1:</td> <td>4 [HDMI input 2]</td> </tr> <tr> <td>1 [USB-C input]</td> <td>5 [HDMI input 3]</td> </tr> <tr> <td>2 [DisplayPort input]</td> <td>6 [HDMI input 4]</td> </tr> <tr> <td>3 [HDMI input 1]</td> <td>7 [HDMI input 5]</td> </tr> </table>	Available values for N1 :	4 [HDMI input 2]	1 [USB-C input]	5 [HDMI input 3]	2 [DisplayPort input]	6 [HDMI input 4]	3 [HDMI input 1]	7 [HDMI input 5]																
Available values for N1 :	4 [HDMI input 2]																								
1 [USB-C input]	5 [HDMI input 3]																								
2 [DisplayPort input]	6 [HDMI input 4]																								
3 [HDMI input 1]	7 [HDMI input 5]																								
GET IN N1 HDCP STATUS ↵	<p>Show the current HDCP status of the specified input.</p> <table> <tr> <td>Available values for N1:</td> <td>Possible response values:</td> </tr> <tr> <td>1 [USB-C input]</td> <td>0 [No HDCP]</td> </tr> <tr> <td>2 [DisplayPort input]</td> <td>1 [HDCP 1.x]</td> </tr> <tr> <td>3 [HDMI input 1]</td> <td>2 [HDCP 2.2]</td> </tr> <tr> <td>4 [HDMI input 2]</td> <td></td> </tr> <tr> <td>5 [HDMI input 3]</td> <td></td> </tr> <tr> <td>6 [HDMI input 4]</td> <td></td> </tr> <tr> <td>7 [HDMI input 5]</td> <td></td> </tr> </table>	Available values for N1 :	Possible response values:	1 [USB-C input]	0 [No HDCP]	2 [DisplayPort input]	1 [HDCP 1.x]	3 [HDMI input 1]	2 [HDCP 2.2]	4 [HDMI input 2]		5 [HDMI input 3]		6 [HDMI input 4]		7 [HDMI input 5]									
Available values for N1 :	Possible response values:																								
1 [USB-C input]	0 [No HDCP]																								
2 [DisplayPort input]	1 [HDCP 1.x]																								
3 [HDMI input 1]	2 [HDCP 2.2]																								
4 [HDMI input 2]																									
5 [HDMI input 3]																									
6 [HDMI input 4]																									
7 [HDMI input 5]																									
GET OUT N1 HDCP STATUS ↵	<p>Show the current HDCP status of the specified output.</p> <table> <tr> <td>Available values for N1:</td> <td>Possible response values:</td> </tr> <tr> <td>A [HDMI output]</td> <td>0 [No HDCP]</td> </tr> <tr> <td>B [HDBaseT™ output]</td> <td>1 [HDCP 1.x]</td> </tr> <tr> <td></td> <td>2 [HDCP 2.2]</td> </tr> <tr> <td></td> <td>3 [HDCP 1.x failed]</td> </tr> <tr> <td></td> <td>4 [HDCP 2.x failed]</td> </tr> </table>	Available values for N1 :	Possible response values:	A [HDMI output]	0 [No HDCP]	B [HDBaseT™ output]	1 [HDCP 1.x]		2 [HDCP 2.2]		3 [HDCP 1.x failed]		4 [HDCP 2.x failed]												
Available values for N1 :	Possible response values:																								
A [HDMI output]	0 [No HDCP]																								
B [HDBaseT™ output]	1 [HDCP 1.x]																								
	2 [HDCP 2.2]																								
	3 [HDCP 1.x failed]																								
	4 [HDCP 2.x failed]																								

SERIAL AND TELNET COMMANDS

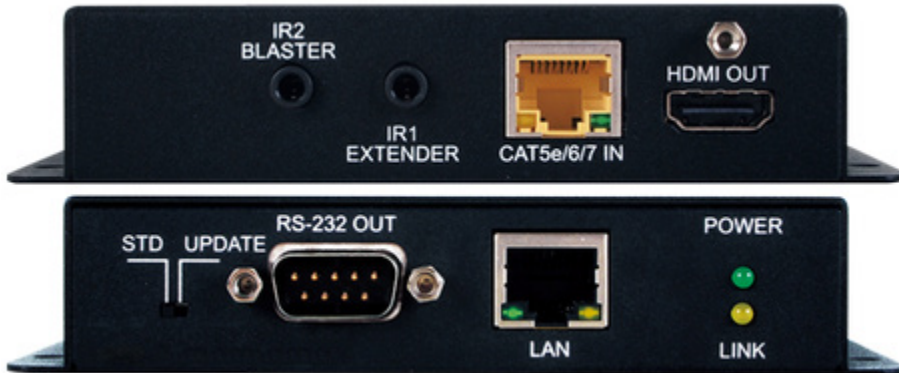
COMMAND	DESCRIPTION AND PARAMETERS
SET RELAY N1 N2 ↵	Open or close the specified relay. N1 = 1~2 [Relay port number] Available values for N2: ON [Closed] OFF [Open]
GET RELAY N1 ↵	Show the current state of the specified relay. N1 = 1~2 [Relay port number]

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

CONNECTION DIAGRAM



ANI-7251RX RECEIVER (OPTIONAL)



THIS PAGE IS INTENTIONALLY LEFT BLANK.

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY BEFORE USING THIS HARDWARE, COMPONENTS AND SOFTWARE PROVIDED BY, THROUGH OR UNDER A-NeuVideo, INC (COLLECTIVELY, THE "PRODUCT"). By using installing or using the Product, you unconditionally signify your agreement to these Terms and Conditions. If you do not agree to these Terms and Conditions, do not use the Product and return the Product to A-NeuVideo, Inc. at the return address set forth on the Product's packing label at your expense. A-NeuVideo, Inc. may modify these Terms and Conditions at anytime, without notice to you. This unit comes with a 3 Year Warranty.

RESTRICTIONS ON USE OF THE PRODUCT

It is your responsibility to read and understand the installation and operation instructions, both verbal and in writing, provided to you with respect to the Product. You are authorized to use the Product solely in connection with such instructions. Any use of the Product not in accordance with such instructions shall void any warranty pertaining to the Product. Any and all damages that may occur in the use of the Product that is not strictly in accordance with such instructions shall be borne by you and you agree to indemnify and hold harmless A-NeuVideo, Inc. from and against any such damage.

The Product is protected by certain intellectual property rights owned by or licensed to A-NeuVideo. Any intellectual property rights pertaining to the Product are licensed to you by A-NeuVideo, Inc. and/or its affiliates, including any manufacturers or distributors of the Product (collectively, "A-NeuVideo") for your personal use only, provided that you do not change or delete any proprietary notices that may be provided with respect to the Product.

The Product is sold to you and any use of any associated intellectual property is deemed to be licensed to you by A-NeuVideo for your personal use only. A-NeuVideo does not transfer either the title or the intellectual property rights to the Product and A-NeuVideo retains full and complete title to the intellectual property rights therein. All trademarks and logos are owned by A-NeuVideo or its licensors and providers of the Product, and you may not copy or use them in any manner without the prior written consent of A-NeuVideo, which consent may be withheld at the sole discretion of A-NeuVideo.

The functionality and usability of the Product is controlled by A-NeuVideo, Inc. from its offices within the State of Texas, United States of America. A-NeuVideo makes no representation that materials pertaining to the Product are appropriate or available for use in other locations other than the shipping address you provided with respect thereto. You are advised that the Product may be subject to U.S. export controls.

DISCLAIMERS AND LIMITATION OF LIABILITY

A-NeuVideo may change or modify the Product at any time, from time to time.

THE PRODUCT IS PROVIDED "AS IS" AND WITHOUT WARRANTIES OF ANY KIND EITHER EXPRESS OR IMPLIED. A-NEUVIDEO DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE PRODUCT'S CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE.

A-NeuVideo has no duty or policy to update any information or statements pertaining to the Product and, therefore, such information or statements should not be relied upon as being current as of the date you use the Product. Moreover, any portion of the materials pertaining to the Product may include technical inaccuracies or typographical errors. Changes may be made from time to time without notice with respect to the Product.

TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, A-NEUVIDEO DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. A-NEUVIDEO DOES NOT WARRANT THE ACCURACY, COMPLETENESS OR USEFULNESS OF ANY INFORMATION WITH RESPECT TO THE PRODUCT. A-NEUVIDEO DOES NOT WARRANT THAT THE FUNCTIONS PERTAINING TO THE PRODUCT WILL BE ERROR-FREE, THAT DEFECTS WITH RESPECT TO THE PRODUCT WILL BE CORRECTED, OR THAT THE MATERIALS PERTAINING THERETO ARE FREE OF DEFECTS OR OTHER HARMFUL COMPONENTS. A-NEUVIDEO WILL USE ITS REASONABLE EFFORTS TO CORRECT ANY DEFECTS IN THE PRODUCT UPON TIMELY WRITTEN NOTICE FROM YOU NOT TO EXCEED 10 BUSINESS DAYS AFTER RECEIPT BY YOU OF THE PRODUCT, BUT YOU (AND NOT A-NEUVIDEO) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR AND CORRECTION THAT WAS CAUSED BY YOU UNLESS OTHERWISE AGREED TO IN A SEPARATE WRITING BY A-NEUVIDEO.

UNDER NO CIRCUMSTANCES, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, SHALL A-NEUVIDEO BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OF, OR THE INABILITY TO USE THE PRODUCT IN ACCORDANCE WITH ITS SPECIFICATIONS, EVEN IF A-NEUVIDEO OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL A-NEUVIDEO'S TOTAL LIABILITY TO YOU FROM ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT, OR OTHERWISE) EXCEED THE AMOUNT YOU PAID TO A-NEUVIDEO, IF ANY, FOR THE PRODUCT.