# NSTRUCTION MANUAL

# ANI-MODZ

**ANI-MODZ Series: Modular Matrix Switcher** 

















A-NeuVideo.com Frisco, Texas 75036





# SAFETY INFORMATION



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

PACKAGE CONTENTS	1
INTRODUCTION	2
SYSTEM REQUIREMENTS	2
FEATURES	2
SPECIFICATIONS	3
ANI-MODZ16/ANI-MODZ32	6
FRONT PANEL OPERATION	6
REAR PANEL OPERATION ANI-MODZ16	7
REAR PANEL OPERATION ANI-MODZ32	8
REMOTE CONTROL	9
INPUT & OUTPUT MODULES	
INPUT MODULES	
OUTPUT MODULES	12
TRANSMITTER & RECEIVER OPTIONS	13
CONNECTION DIAGRAM	
IR CABLE PIN ASSIGNMENTS	16
RS-232 PROTOCOLS	17
RS-232&TELNETCOMMANDS	
TELNET CONTROL	20
WEB GUI CONTROL	23

#### **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.

#### PACKAGE CONTENTS

Before connecting the unit, it is necessary to unpack it from the shipping carton and inspect the unit for any damage. While the cards are hot-swappable, it is recommended to install the cards before connecting the unit. This will make the installation easier.

- ANI-MODZ Modular Matrix Enclosure (including CPU Control Board and Removeable Dual Power Supplies)
- (Optional) Input Module Boards HDMI, DVI, CAT5e/6/7 or VGA
- (Optional) Output Module Boards HDMI, DVI or CAT5e/6/7
- IR Extender (included with Transmitter module only\*)
- IR Blaster (included with Receiver module only\*)
- · Remote Control
- (2) Power Cords
- Users Guide

\*Both the IR Blaster and the IR Extender are NOT included with EACH module.

#### 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 2022. All Rights Reserved. Version 3.8 AUG 2022

#### TRADEMARK ACKNOWLEDGMENTS

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



# INTRODUCTION

The ANI-MODZ Modular Matrix is designed to allow the switching and distribution of up to (32) source devices to up to (32) connected displays (model specific), either directly via a HDMI, DVI or CAT5e/6/7 outputs to compatible receivers, providing control options. (Dependent on module configuration)

Providing unparalleled levels of flexibility, with an advanced modular design, these models can be setup in a wide variety of combinations allowing users the ability to tailor the Matrix to their requirements by simply adding or removing the input or output modules as required.

The Modular Matrix is supplied with dual removable internal power supply units, which allow for easy inspection and maintenance. Also included is a **DVI output for local monitoring** of the output, allowing installers to easily monitor, test and configure the Inputs and Outputs on installation.

In addition, this matrix also features IP control allowing users to access and control the matrix remotely while also allowing additional options for integration of a third-party control system. This product has a 3 year warranty.

#### ANI-MODZ MODULAR MATRIX SWITCHER CHASSIS'

MODELS	HEIGHT	MAXIMUM SLOT	POWER SUPPLIES	RS-232 CONTROL	NETWORK CONTROL	DVI MONITOR PORT
ANI-MODZ16	~5.7 in	2 input card slots & 2 output card slots	Dual	✓	✓	✓
ANI-MODZ32	~9.2 in	4 input card slots & 4 output card slots	Dual	✓	✓	✓

# SYSTEM REQUIREMENTS

- Up to (32) HDMI, DVI, CAT5e/6/7 or VGA source devices (dependent on module configuration) connected with appropriate cables
- Up to (32) displays (TV or monitor) or AV receivers equipped with HDMI, DVI, CAT5e/6/7 connections (dependent on module configuration) connected with appropriate cables
- Industry standard CAT5e/6/7 cable (for CAT5e/6/7 inputs/outputs)
- Compatible PoC HDBaseT™ Transmitters/Receivers for CAT5e/6/7
- · Input/Output modules
- · An overall good attitude on life!

#### **FEATURES**

- · HDMI, HDCP 1.1 and DVI 1.0 compliant
- · Interchangeable input and output modules
- Input and output module types can be mixed and added in multiples of (8) from 16x16 ((2) Input module, (2) Output module) up to 32x32 ((4) Input modules, (4) Output modules) with HDMI, DVI, CAT5e/6/7 and VGA (Input only) connection types
- Supports a wide range of PC and HDTV resolutions from VGA to WUXGA and 480i to 1080p@60Hz and 4K2K@24/25/30Hz
- Supports pass-through of LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio
- · Supports control of the matrix via front panel buttons, remote control, RS-232, Telnet and WebGUI controls
- · Supports (10) available preset settings
- · Supports (3) EDID Modes: Standard, Dynamic and Manual
- · Dual removable power supply units
- DVI Monitor Port included on the 16x16 and 32x32 models
- Supports HDMI cable input lengths for up to ~50 ft/15M each way (1080p@60Hz 8bit resolution), ~33 ft/10M (1080p@60Hz 12bit resolution) or ~17 ft/5M (4K2K@30Hz resolution)
- Supports CAT5e/6/7 cable output lengths for up to ~330 ft/100M (1080p@60Hz 8bit/12bit resolution) or ~230 ft/70M (4K2K@30Hz resolution) dependent on board capabilities
- HDBaseT<sup>™</sup> 5Play<sup>™</sup> convergence supports UHD Video, HD Audio, PoC, Ethernet and IR/RS-232 Control
- HDBaseT<sup>™</sup> 4Play<sup>™</sup> convergence supports HD Video, HD Audio, PoC and IR/RS-232 Control
- HDBaseT<sup>™</sup> 3Play<sup>™</sup> convergence supports HD Video, HD Audio and IR/RS-232 Control



# MAIN UNITS

# ANI-MODZ16



GENERAL			
Input Modular Slots	(2)	Output Modular Slots	(2)
Input Channels	(16) HDMI or DVI or CAT5e/6/7 or VGA (dependent on module configuration)	Output Channels	(16) HDMI or DVI or CAT5e/6/7 (dependent on module configuration)
Power Supply	(2) AC 110~240V 50/60Hz (US/EU standards, CE/ FCC/UL certified)	Installation	Rack Mountable
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	50W
Case Dimension (WxDxH)	19 x 19 x 5.7 in (482x484x145mm)	Product Weight	32 lb (14.4Kg)
Color	Black	Chassis Material	Metal
DVI Monitor Port	Included		



# MAIN UNITS

# ANI-MODZ32



GENERAL			
Input Modular Slots	(4)	Output Modular Slots	(4)
Input Channels	(32) HDMI or DVI or CAT5e/6/7 or VGA (dependent on module configuration)	Output Channels	(32) HDMI or DVI or CAT5e/6/7 (dependent on module configuration)
Power Supply	(2) AC 110~240V 50/60Hz (US/EU standards, CE/ FCC/UL certified)	Installation	Rack Mountable
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	70W
Case Dimension (WxDxH)	19 x 19.4 x 9.2 in (482x494x233mm)	Product Weight	39 lb (17.7Kg)
Color	Black	Chassis Material	Metal
DVI Monitor Port	Included		



# ANI-MODZ SIGNAL CARD (CHANGEABLE CARDS)

The ANI-MODZ series input and output cards for installation into the modular matrix switcher chassis are classified into the following models.

#### **ANI-MODZ Input cards**

MODELS	INPUTS	SIGNAL FORMAT
ANI-IN-5P	8	HDBaseT™
ANI-IN-4K	8	4K HDMI
ANI-IN-DV	8	DVI

#### **ANI-MODZ Output cards**

MODELS	OUTPUTS	SIGNAL FORMAT
ANI-OUT-5P	8	HDBaseT™
ANI-OUT-4P	8	HDBaseT™
ANI-OUT-4K	8	4K HDMI
ANI-OUT-DV	8	DVI

# CATSE/6/7 CABLE SPECIFICATIONS

#### ANI-IN-5P and ANI-OUT-5P Cable Distances:

<b>CABLE TYPE</b>	RANGE	PIXELCLOCKRATE	VIDEO DATA RATE	SUPPORTED VIDEO FORMATS
CAT5e/6/7	~330 ft/100M	≤225MHz		Up to 1080p@60Hz, 36bit, 3D (data rates lower than 5.3Gbps or below 225MHz TMDS clock)
	~230 ft/70M	>225MHz	>5.3Gbps (Ultra HD Video)	4K2K@30Hz video formats

#### **ANI-OUT-4P Cable Distances:**

<b>CABLE TYPE</b>	RANGE	PIXELCLOCKRATE	VIDEO DATA RATE	SUPPORTED VIDEO FORMATS
CAT5e/6/7	~330 ft/100M	≤225MHz	≤5.3Gbps (HD Video)	Up to 1080p@60Hz, 36bit, 3D (data rates lower than 5.3Gbps or below 225MHz TMDS clock)

#### **ANI-OUT-3P Cable Distances:**

CABLE TYPE	RANGE	PIXELCLOCKRATE	VIDEO DATA RATE	SUPPORTED VIDEO FORMATS
CAT5e/6/7	~197 ft/60M	≤225MHz	≤5.3Gbps (HD Video)	Up to 1080p@60Hz, 36bit, 3D (data rates lower than 5.3Gbps or below 225MHz TMDS clock)

While cable distance is dependent on the quality of the cable that you use and the resolution, here is a general reference:

CABLE	DISTAN	DISTANCE	
HDMI	~50 ft	15M	
VGA	~65 ft	20M	

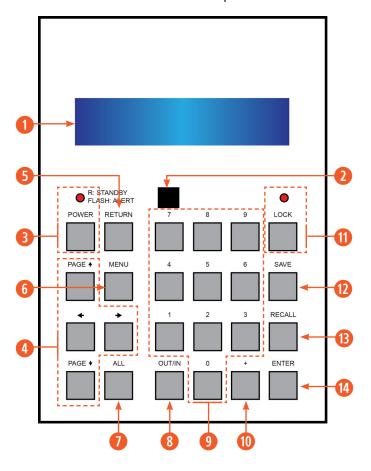
CABLE	DISTANCE	
DVI	~23 ft	7M
HDBaseT™	~230 ft	70M

- EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.
- The quality of the CAT cable and the type of source/display devices have a major effect on how long the transmission distance can be made.
- The actual transmission length is subject to your CAT cables. For resolutions greater than 1080i or 1280x1024, a CAT6 cable is recommended.
- Cable distances are greatly reduced when using patch panels, couples, wall plates, and other intermediary devices. The best performance is from a contiguous CAT cable.
- The ANI-MODZ is not compatible with EZ-RJ45 connectors.

# **ANEUVIDEO**

# FRONT PANEL OPERATION

ANI-MODZ16/ANI-MODZ32: The front panel for both the ANI-MODZ16 and the ANI-MODZ32 is shown below.



- 1 LCM: Displays the setting information of each input/output and other setting information according to the selected mode.
- 2 IR WINDOW: Accepts the IR remote control signal for the matrix only.
- 3 POWER: Press this button to turn the matrix on or press it again to put the matrix into standby mode. The LED will illuminate when the unit is in standby mode.

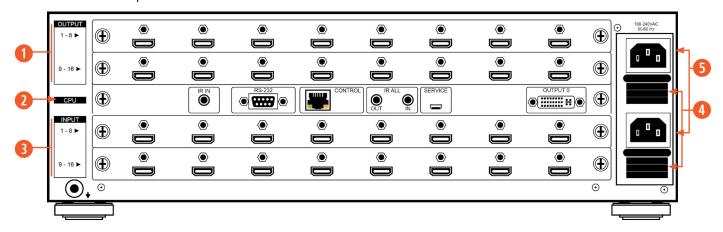
Note: If the LED is flashing it means the temperature inside is too high and air circulation may be restricted.

- **§ RETURN:** Press this button to return back or exit the current selection.
- 6 MENU: Press this button to enter the menu to change the following settings:
  - EDID: Supports (3) EDID modes.
    - 1. Standard Mode: Uses the built-in EDID settings that supports video up to 1080p@60Hz or WUXGA@60 (RB) video and LPCM 2CH audio.
    - 2. Dynamic Mode: Reads the EDID settings from the display connected to the lowest numbered output port.
    - 3. Manual Mode: Supports independent EDID settings by selecting the input and output ports.
      - IP: Displays the setting information of the IP address, IP Netmask and IP Gateway.
      - Temperature: These figures show the internal temperature of the matrix.
      - LCM: Supports LCM contrast range from 1 to 4.
- ALL: Press this button to assign the same input to all outputs.
- ③ OUT/IN: Press to assign the source to be displayed on the required output. The sequence should be OUT/IN→Select the Input→OUT/IN→Select the Output→Enter.
- ONUMBERS (0~9): Used to select the appropriate numbered input or output.
- PLUS (+): Press this button when multiple outputs are required for a selected input. This button only works in conjunction with the OUT/ IN button.
- 🛈 LOCK: Press this button to lock all the function buttons on the front panel. The LED will illuminate, to unlock press it again.
- SAVE: Press this button to store the present Input/Output configuration to one of the (10) available preset locations.
- B RECALL: Press this button to recall a previously stored preset setting.
- ENTER: Press this button to confirm a setting or selection in the menu.



# **BACK PANEL OPERATION**

ANI-MODZ16: The back panel for the ANI-MODZ16 is shown below.



Note: The above panel is an example of 16x16 HDMI configuration.

OUTPUT 1~16: Install up to (2) Output modules as required for up to (16) displays (TVs or monitors) or CAT5e/6/7 outputs for compatible HDBaseT™ receivers. (dependent on module configuration)

#### **2** CPU (CONTROL BOARD):

- **IR IN:** For IR control of the matrix only. Connects to the IR Extender for IR signal reception of the IR remote control of the matrix. Ensure that the remote being used is within the direct line-of-sight of the IR Extender.
- RS-232: Connects to a PC/Laptop with a D-sub 9-pin cable for RS-232 control over the Matrix.
- CONTROL: Connects to an active network for Telnet/WebGUI control.
- ALL IR OUT: Connects the IR output to the IR Blaster for IR signal transmission of the equipment to be controlled. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
- ALL IR IN: Connects the IR input to the IR Extender for IR signal reception of the IR remote control of the equipment to be controlled. Ensure that the remote being used is within the direct line-of-sight of the IR Extender.

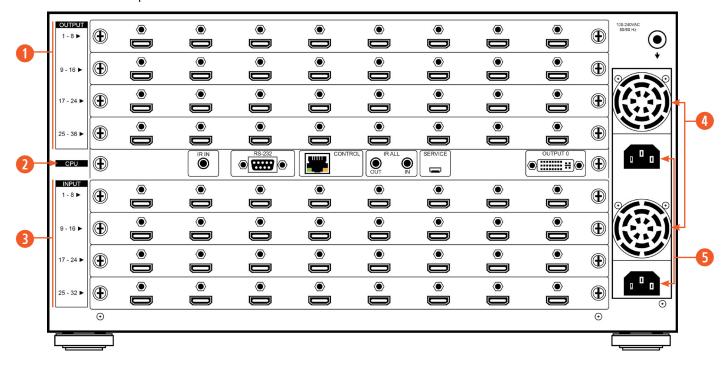
Note: For IR control of the HDBaseT™ input/output modules and transmitters/receivers only. IR signals received by all IR Extenders connected to the transmitters/receivers will be transmitted by all IR Blasters connected to the transmitters/receivers.

- · SERVICE: Firmware update only.
- **OUTPUT 0:** Connects to a DVI equipped display or to a HDMI equipped display (with a DVI to HDMI adaptor) for local monitoring of the output signal.
- **③ INPUT 1~16:** Installs up to (2) Input modules as required for connection to up to (16) source devices or CAT5e/6/7 inputs for compatible HDBaseT™ transmitters. (dependent on module configuration)
- VENTILATION FAN: This fan will automatically operate when the matrix is switched on. Do not block the exhaust fan or cover it with any object. Please allow adequate space around the unit for air to circulate freely.
- OWER SUPPLY: The matrix will automatically turn on when connected to an active power supply.



# **BACK PANEL OPERATION**

ANI-MODZ32: The back panel for the ANI-MODZ32 is shown below.



Note: The above panel is an example of the 32x32 HDMI configuration.

OUTPUT 1~32: Installs up to (4) Output modules as required for up to (32) displays (TVs or monitors) or CAT5e/6/7 outputs for compatible HDBaseT™ receivers. (dependent on module configuration)

#### **2** CPU (CONTROL BOARD):

- **IR IN:** For IR control of the matrix only. Connects to the IR Extender for IR signal reception of the IR remote control of the matrix. Ensure that the remote being used is within the direct line-of-sight of the IR Extender.
- RS-232: Connects to a PC/Laptop with a D-sub 9-pin cable for RS-232 control over the Matrix.
- CONTROL: Connects to an active network for Telnet/WebGUI control.
- ALL IR OUT: Connects the IR output to the IR Blaster for IR signal transmission of the equipment to be controlled. Place the IR Blaster in the direct line-of-sight of the equipment to be controlled.
- ALL IR IN: Connects the IR input to the IR Extender for IR signal reception of the IR remote control of the equipment to be controlled. Ensure that the remote being used is within the direct line-of-sight of the IR Extender.

Note: For IR control of the HDBaseT™ input/output modules and transmitters/receivers only. IR signals received by all IR Extenders connected to the transmitters/receivers will be transmitted by all IR Blasters connected to the transmitters/receivers.

- · SERVICE: Firmware update only.
- **OUTPUT 0:** Connects to a DVI equipped display or to an HDMI equipped display (with a DVI to HDMI adaptor) for local monitoring of the output signal.
- § INPUT 1~32: Installs up to (4) Input modules as required for connection to up to (32) source devices or CAT5e/6/7 inputs for compatible HDBaseT™ transmitters. (dependent on module configuration)
- VENTILATION FAN: This fan will automatically operate when the matrix is switched on. Do not block the exhaust fan or cover it with any object. Please allow adequate space around the unit for air to circulate freely.
- POWER SUPPLY: The matrix will automatically turn on when connected to an active power supply.

# **A** NEUVIDEO

# REMOTE CONTROL

1 POWER: ON/OFF button

**2 OUTPUT:** Output port button

**③ INPUT:** Input port button

4 ENTER: Press to confirm the present input/output selection

5 CLEAR: Press to clear the present input/output selection

Channels should be entered using two digits.

For Example: Entering channel 2 should be "02"

#### To Enter a Cross Point:

Enter the Output channel, then Input channel, followed by **ENTER** 

For Example: To route Input 3 to Output 5

**05** (Output buttons)

03 (Input buttons)

**ENTER** 

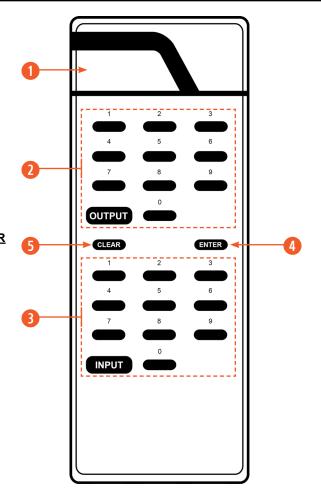
For Example: To route Input 29 to Output 6

06 (Output buttons)

29 (Input buttons)

**ENTER** 

The **CLEAR** button will delete the last number entered.



# IR CODES

CUSTOM CODE: 8013

POWERTOGGLE:	8013 86	OUTPUTS:		INPUTS:	
CLEAR:	8013 85	OUTPUT 0:	8013 95	INPUT 0:	8013 CC
ENTER:	8013 C6	OUTPUT 1:	8013 88	INPUT 1:	8013 9C
		OUTPUT 2:	8013 89	INPUT 2:	8013 9D
		OUTPUT 3:	8013 8A	INPUT 3:	8013 98
		OUTPUT 4:	8013 8C	INPUT 4:	8013 D8
		OUTPUT 5:	8013 8D	INPUT 5:	8013 9E
		OUTPUT 6:	8013 8E	INPUT 6:	8013 84
		OUTPUT 7:	8013 90	INPUT 7:	8013 87
		OUTPUT 8:	8013 91	INPUT 8:	8013 8F
		OUTPUT 9:	8013 92	INPUT 9:	8013 97



# INPUT MODULES

# ANI-IN-5P

# 8 Port HDBaseT™ Input Module























SPECIFICATIONS					
Video Bandwidth	300MHz/10.2Gbps				
Features	HD Video/Audio, PoC, Ethernet, IR/RS-232 Pass Thru				
Input Ports	(8) CAT5e/6/7, (1) LAN				
Ethernet Speed	100Mbps				
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz & 4K2K@30Hz				
IR Frequency	30~50Hz				
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)				
Power Consumption	45W+ 10W PoC/each port				

#### ANI-IN-4K

# 8 Port 4K HDMI Input Module





















SPECIFICATIONS	
Video Bandwidth	300MHz/10.2Gbps
Input Ports	(8) HDMI
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz & 4K2K@30Hz
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)
Power Consumption	22W

# **ANI-IN-DV**

# **8 Port DVI Input Module**







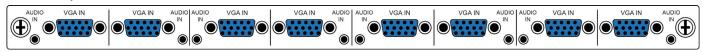
SPECIFICATIONS	
Video Bandwidth	225MHz/6.75Gbps
Input Ports	(8) DVI
Video Resolutions	PC: VGA~WUXGA@60 (RB) HDTV: 480i~1080p@60Hz
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)
Power Consumption	20W



# INPUT MODULES

# ANI-IN-VG

# **8 Port VGA Input Module**



SPECIFICATIONS	
Input Ports	(8) VGA, (8) 2.5mm Audio Phone Jack
Video Resolutions	PC: VGA~WUXGA@60 (RB)
Audio Transmission	Stereo 2.5mm phone jack (included 2.5mm to 3.5mm adaptor)
Power Consumption	22W

# A-NEUVIDEO

# **OUTPUT MODULES**

#### ANI-OUT-5P

#### 8 Port HDBaseT™ Output Module



SPECIFICATIONS						
Video Bandwidth	300MHz/10.2Gbps					
Features	HD Video/Audio, PoC, Ethernet, IR, RS-232 Pass Thru					
Output Ports	(8) CAT5e/6/7, (1) LAN, (8) IR Extender, (8) IR Blaster					
Ethernet Speed	100Mbps					
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz & 4K2K@30Hz					
IR Frequency	30~50Hz					
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)					
Power Consumption	45W+ 10W PoC/each port					

#### ANI-OUT-4P

#### 8 Port HDBaseT™ Output Module



SPECIFICATIONS						
Video Bandwidth	225MHz/6.75Gbps					
Features	HD Video/Audio, PoC, IR, RS-232 Pass Thru					
Output Ports	(8) CAT5e/6/7, (8) IR Extender, (8) IR Blaster					
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz					
IR Frequency	30~50Hz					
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)					
Power Consumption	43W+ 10W PoC/each port					

# ANI-OUT-3P

#### 8 Port HDBaseT™ Output Module



SPECIFICATIONS						
Video Bandwidth	225MHz/6.75Gbps					
Features	HD Video/Audio, IR, RS-232 Pass Thru					
Output Ports	(8) CAT5e/6/7, (8) IR Extender, (8) IR Blaster					
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz					
IR Frequency	30~50Hz					
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)					
Power Consumption	43W					

4K 2K



# **OUTPUT MODULES**

# **ANI-OUT-4K**

# 8 Port 4K HDMI Output Module



SPECIFICATIONS	
Video Bandwidth	300MHz/10.2Gbps
Output Ports	(8) HDMI
Video Resolutions	PC: VGA~WUXGA HDTV: 480i~1080p@60Hz, 4K2K@30Hz
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)
Power Consumption	22W

#### **ANI-OUT-DV**

# **8 Port DVI Output Module**



SPECIFICATIONS	
Video Bandwidth	225MHz/6.75Gbps
Output Ports	(8) DVI
Video Resolutions	PC: VGA~WUXGA@60 (RB) HDTV: 480i~1080p@60Hz
Audio Transmission	LPCM7.1CH, Dolby TrueHD, Dolby Digital Plus, DTS-HD Master Audio (32~192KHz Fs sample rate)
Power Consumption	20W

# TRANSMITTERS & RECEIVERS

MANUFACTURE PART#	TYPE	BODY TYPE	4K	3D	HD AUDIO	IR	RS-232	ETHERNET	POC*	EXTERNAL POWER	1080P@60HZ/ UHD CABLE LENGTH
ANI-315XLR	Receiver	Stand Alone	<b>√</b>	✓	✓	1-WAY	<b>✓</b>			5V	60 / 35M
ANI-315XLT	Transmitter	Stand Alone	✓	✓	✓	1-WAY	✓			5V	60 / 35M
ANI-605XPLBDR	Receiver	Stand Alone	✓	✓	✓	2-WAY	✓		✓	24V	60 / 35M
ANI-605XPLBDT	Transmitter	Stand Alone	✓	✓	✓	2-WAY	✓		✓	24V	60 / 35M
ANI-705WPR	Receiver	Wall Plate	✓	✓	✓	2-WAY	✓	✓	✓		100 / 70M
ANI-705XBDR	Receiver	Stand Alone	✓	✓	✓	2-WAY	✓	✓	✓	24V	100 / 70M
ANI-705XBDT	Transmitter	Stand Alone	✓	✓	✓	2-WAY	✓	✓	<b>√</b>	24V	100 / 70M

<sup>\*</sup>Requires Input or Output card with PoC

# **ANI-315XLR - RECEIVER**

# **ANI-605XPLBDR - RECEIVER**

# **ANI-705XBDR - RECEIVER**







# **ANI-315XLT - TRANSMITTER**

# ANI-605XPLBDT - TRANSMITTER ANI-705XBDT - TRANSMITTER







**ANI-705WPR - RECEIVER** 

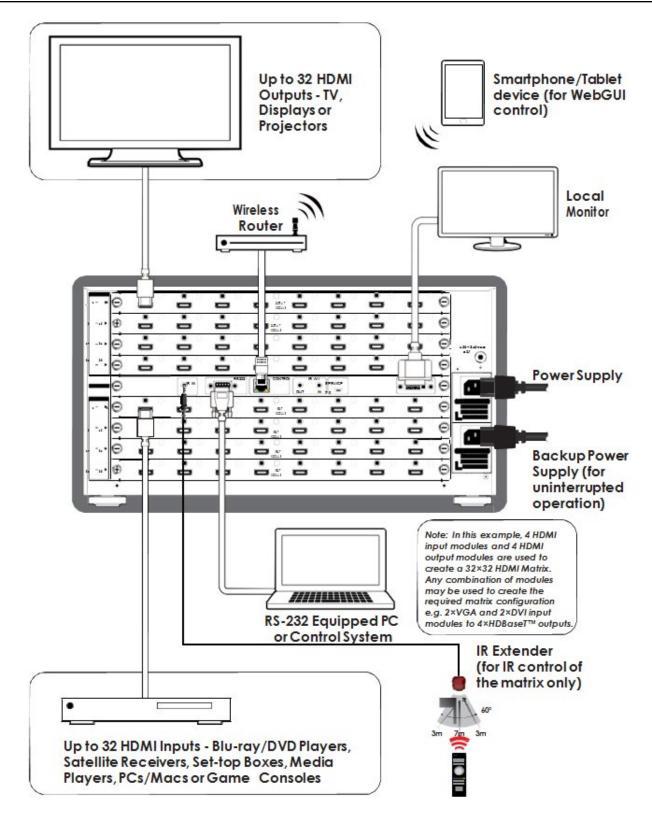
**ANI-705WPT - TRANSMITTER** 



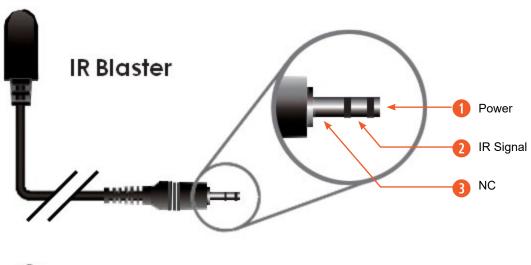


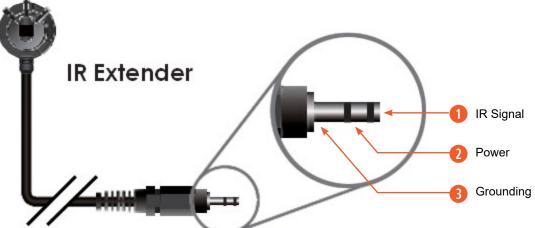
# **ANEUVIDEO**

# **EXAMPLE INSTALLATION (32X32 HDMI MATRIX)**



# A NEU VIDEO









MATRIX					
Pin	Definition				
1	NC				
2	TxD				
3	RxD				
4	NC				
5	GND				
6	NC				
7	NC				
8	NC				
9	NC				



RS-232 CONTROL					
Pin	Definition				
1	NC				
2	RxD				
3	TxD				
4	NC				
5	GND				
6	NC				
7	NC				
8	NC				
9	NC				

Baud Rate: 19200Bps

Data Bit: 8bits Parity: None Stop Bit: 1

Flow Control: None



COMMAND CODES	FUNCTIONS
P1	Power on
P0	Power off
Oxly	Set Output (x=1~32) to Input (y=1~32)
ALLOUT x	Set all Outputs to Input (x=1~32)
ACTIVE	Report active I/O channels
INDETECT	Input channel detection indicator
OUTDETECT	Output channel detection indicator
PORTSTATUS	Reports all Output connection status
HDCPON x	Set Input port (x=1~32) HDCP to 'ON'
HDCPOFF x	Sets Input port (x=1~32) HDCP to 'OFF'
HDCPONALL	Sets all Input port's HDCP to 'ON'
HDCPOFFALL	Sets all Input port's HDCP to 'OFF'
HDCPSTATUS	Shows the HDCP status of all Outputs (0=Disabled, 1=Enable)
MUTEO x	Mutes video for Output (x=1~32)
UNMUTEO x	Unmutes video for Output (x=1~32)
MUTEI x	Mutes video for Input (x=1~32)
UNMUTEI x	Unmutes video for Input (x=1~32)
MUTEALL	Mutes all Outputs
UNMUTEALL	Unmutes all Outputs
MUTESTATUS	Shows the mute status of all Outputs
HPDL x	Pulls the Input (x=1~8) hot-plug-detect signal to 'LOW'.
HPDH x	Pulls the Input (x=1~8) hot-plug-detect signal to 'HIGH'
HPDLALL	Sets the hot-plug-detect of all Inputs to 'LOW'
HPDHALL	Sets the hot-plug-detect of all Inputs to 'HIGH'
HPDSTATUS	Reports the hot-plug-detect signal status of all Inputs
EDIDMODE x y	Sets the EDID mode of Inputs (x=1~32) to y (1~3) *See Page 19 for details.
EDIDMODEALL x	Sets the EDID mode of all Inputs to x (1~3)
EDIDPORT y x ( <i>NOTE:</i> Positions of x and y do not follow convention)	Sets the EDID mode of the assigned port Input (y=1~32) to Output (x=1~32)
EDIDPORTALL x	The EDID mode of all ports are assigned to the Outputs (x=1~32)
EDIDSTATUS	Reports the status of the EDID modes of all Inputs
IRMASKOUT x y z*	Disable/enable (z=0/1) IR transmission from the IR input on the specified HDBaseT <sup>™</sup> Output Module's port (y=1~32/all) to the currently routed HDBaseT <sup>™</sup> Transmitter (x=src) or Receiver (x=sink).  **Example 1: "IRMASKOUT src 10 0" disables IR transmissions from the HDBaseT <sup>™</sup> Output Module's IR In port #10 to the currently routed HDBaseT <sup>™</sup> Transmitter's IR Out.  **Example 2: "IRMASKOUT sink 5 1" enables IR transmissions from the HDBaseT <sup>™</sup> Output Module's IR In
	port #5 to the currently routed HDBaseT™ Receiver's IR Out.



COMMAND CODES	FUNCTIONS
IRMASKCPU x y z*	Disable/enable (z=0/1) IR transmission from the IR ALL input on the CPU Control Board to the HDBaseT™
	Transmitter (x=src), Receiver (x=sink) or Output Module (x=out) on to the specified port (y=1~32/all).
	<b>Example 1:</b> "IRMASKCPU src all 0" disables IR transmissions from the CPU Control Board's IR ALL In port to all connected HDBaseT™ Transmitters' IR Out.
	<b>Example 2:</b> "IRMASKCPU out 5 1" enables IR transmissions from the CPU Control Board's IR ALL In port to the HDBaseT™ Output Module's port #5 IR Out.
SHOWIRMASKOUT x y*	Display the current IR mask setting for the specified HDBaseT™ Output Module's port (y=1~32/all) to HDBaseT™ Transmitters (x=src) or Receivers (x=sink).
SHOWIRMASKCPU x y*	Display the current IR mask setting for the IR ALL input on the CPU Control Board to the HDBaseT™ Transmitter (x=src), Receiver (x=sink) or Output Module (x=out) on to the specified port (y=1~32/all).
UART x y "str"	Writes UART string to the Output port (x=in/out, y=1~32, "str"="string")
UARTBAUD x y	Sets the UART Baud rate of the Output (x=1~32, y=rate)
STATUSUART	Shows the UART Baud rate of the Output
TEMPSTATUS	Shows temperature sensor values y1 and y2
SETIPADDR	Sets the IP address (x.x.x.x)
SETSNMASK	Sets the Subnet Mask address (x.x.x.x)
SETGWADDR	Sets the Gateway address (x.x.x.x)
IPCONFIG	Shows the current IP configuration
RSTIP	Resets the IP configuration to the default values (DHCP)
BUZZER x	Sets the buzzer (0=mute, 1=unmute)
REBOOT	Reboots the system
SAVETO x	Save as preset x (1~10) **See below for details.
RECALLTO x	Recalls the preset x (1~10) **See below for details.
RESET	Resets the system to O1I1, O2I2, O3I3, O4I4, O5I5, etc.
VERSION	Shows the firmware version

#### NOTE:

- 1. HELP: Shows command list.
- 2. Commands will be not executed unless followed by a carriage return. Commands are <u>NOT</u> case-sensitive.
- 3. Commands with one asterisk (\*) will function on compatible HDBaseT™ Input/Output modules and transmitters/receivers only.
- 'SINK'=The connected Receiver(s), 'SRC'=The connected Transmitter(s), 'OUT'=The CPU control board and 'ALL'=All IR ports.

# \*EDID: SUPPORTS 3 EDID MODES

- 1= Standard Mode: Uses the built-in EDID settings that support video up to 1080p@60Hz or WUXGA@60 (RB) video and LPCM 2CH audio.
- **2= Dynamic Mode:** Reads the EDID settings from the display connected to the lowest numbered output port. *For Example:* If outputs 2 6 8 9 are connected, the EDID of Output 2 will be used. When Output 2 is unplugged, the EDID of Output 6 will be used. When using Dynamic mode, make sure the EDID of the lowest port can be supported by all output displays.
- **3= Manual Mode:** Supports independent EDID settings by selecting the input and output ports.

# \*\*SAVE/RECALL FUCTIONS

The Save/Recall function will save the current matrix cross points and also any changes to the EDID modes or assigned ports.



# SETUP PROCEDURE FOR 4K2K UHD

The default EDID setting, regardless of I/O cards, is 1080p@60Hz. Because EDID determines when a source can output a 4K2K signal, the matrix switcher must be told which source and display to use for EDID information exchange. These changes are done using the front panel of the matrix or Telnet.

Using the Telnet command "EDIDSTATUS" it will return results like this.

#### telnet-> edidstatus

EDID Mode: (1) INTERNAL (2) DYNAMIC (3) MANUAL

I01:1 I02:1 I03:1 I04:1 I05:1 I06:1 I07:1 I08:1 I09:1 I10:1 I11:1 I12:1 I13:1 I14:1 I15:1 I16:1 I17:1 I18:1 I19:1 I20:1 I21:1 I22:1 I23:1 I24:1 I25:1 I26:1 I27:1 I28:1 I29:1 I30:1 I31:1 I32:1

#### **EDID Assigned Port:**

I01:01 I02:02 I03:03 I04:04 I05:05 I06:06 I07:07 I08:08 I09:09 I10:10 I11:11 I12:12 I13:13 I14:14 I15:15 I16:16 I17:17 I18:18 I19:19 I20:20 I21:21 I22:22 I23:23 I24:24 I25:25 I26:26 I27:27 I28:28 I29:29 I30:30 I31:31 I32:32

#### telnet->

Say you have a UHD Blu-Ray player connected to Input 4, and your UHD display is on Output 10

You first send Telnet EDIDMODE 4 3

The matrix will confirm with:

"EDIDMODE 4 3"

Example: telnet-> edidmode 4 3

**EDIDMODE 43** 

telnet->

This changes the EDID of the matrix switcher from Internal to External on Input 4

Then you would send Telnet EDIDPORT 4 10

The matrix will confirm with "The EDID of In Port 4 is assigned to Out Port 10."

Example: telnet-> edidport 4 10

The EDID of In Port 4 is assigned to Out Port 10.

telnet->

After making these changes, you Telnet REBOOT

The matrix will power down and back up.

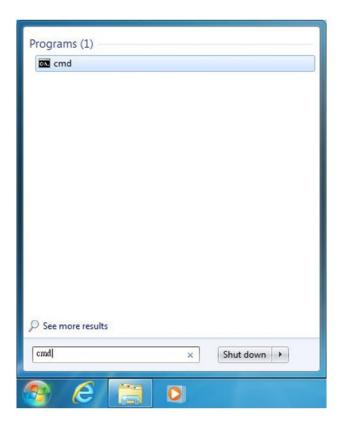
You can map the EDID from any UHD source to any UHD display, in any combination.

When you map a UHD source to a UHD display, the UHD source will work with all your UHD displays, but only in UHD. You can continue to route a 1080p@60Hz signal to any of the UHD displays and have video, but you cannot route a UHD source to a non-UHD display and have video. This is because you mapped the UHD source to be, well, UHD.



Before attempting to use the Telnet control, please ensure that both the Matrix (via the 'LAN /CONTROL' port) and the PC/Laptop are connected to the same active networks.

To access the Telnet control in Windows 7, click on the "Start" menu and type "cmd" in the "Search" field, then press ENTER.



• Under Windows XP go to the "Start" menu and click on "Run", type "cmd", then press ENTER.



• Under Mac OS X, go to Go→Applications→Utilities→Terminal

Once in the command line interface (CLI) type "telnet", then the "IP address" of the unit and "23", then hit ENTER.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Users\Administrator>telnet 192.168.5.80 23
```

NOTE: The IP address of the Matrix can be displayed on the unit's LCM monitor by pressing the MENU button twice.



This will bring us into the unit which we wish to control. Type "help" to list the available commands.

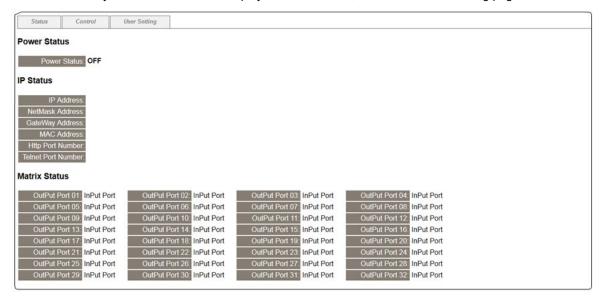
```
telnet-> help
                  PØ : Power Off
                  P1 : Power On
                RESET : System Reset to 0111,0212,0313,0414,0515....
      0xxIxx(x:01~8) : Output 0~8 set to Input 1~8
   ALLOUT xx(x:01~8) : All Output set to Input 1~8
     MUTE xx(x:0~8): Video mute command at output interface
  UNMUTE xx(x:0~8): Video unmute command at output interface
             MUTEALL: Mute all outputs
           UNMUTEALL: Unmute all outputs
             SHOWMUTE : Show mute status of all output(0=not muted,1=muted)
   RDMUTE xx(x:0~8) : Read MUTE Status at Output
  HPDLOW xx(x:01~8) : Pull the Hot-Plug-Detect signal to 'LOW'
  HPDHIGH xx(x:01~8) : Pull the Hot-Plug-Detect signal to 'HIGH'
          HPDLOW ALL : Set All Input HPD to Low
          HPDHIGH ALL: Set All Input HPD to High
              SHOWHPD: Report ALL Input Hot-Plug-Detect signal status
  STATUSHPD x(x:1~8) : Show HPD status of input(x)
           SHOWTEMP : Show temperature sensor values y1, y2
 STATUSIN xx(x:01~8) : Report Input connection status
STATUSOUT xx(x:0~8) : Report Output connection status
            STATUSALL: Report ALL Output connection status
           STATUSEDID : Report ALL Input EDID mode&port
 SETEDIDMODE ii mm(ii:01~8 mm:1~3) : Set EDID mode(mm) to Input(ii)
 SETEDIDMODE ALL mm (mm=1~3): The EDID mode(mm) of All Input(ii)
SETEDIDPORT ii pp(ii:01~8 pp:01~8) : Set EDID Assigned Port(pp) to Input(ii)
 SETEDIDPORT ALL mm (pp=01-8): The EDID of All Inports is assigned to Output
pр
               ACTIVE: Report I/O active channels
             INDETECT : Input channels detect indicator
            OUTDETECT : Output channels detect indicator
             IPCONFIG: Display the current IP config
SETIP <IP> <SubNet> <GW> : Setting IP.SbuNet.GateWay(Static IP)
               RSTIP: IP Configuration Was Reset To Factory Defaults(DHCP)
       SETIPADDR <IP> : Setting IP address
  SETSNMASK (SubNet): Setting subnet mask
       SETGWADDR <GW> : Setting gateway IP address
```

Type "IPCONFIG" to show all the IP configurations. To reset the IP, type "RSTIP" and to use a static IP, type "SETIP" (For a full list of commands, see Section RS-232 & Telnet Commands).

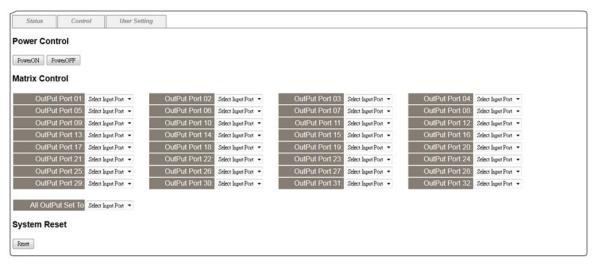
Note: Commands will not be executed unless followed by a carriage return. Commands are <u>NOT</u> case-sensitive. If the IP is changed then the IP Address required for Telnet access will also change accordingly.



On a PC/Laptop that is connected to the same active network as the Matrix, open a web browser and type the unit's "**IP address**" on the web address entry bar. The browser will display the unit's Status, Control and User Setting pages.



Click on the "Control" tab to control power, input/output ports, EDID and reset mode.



Click on the "User Setting" tab to allow you to reset the IP configuration. The system will ask for a reboot of the unit each time any of the settings are changed. The IP address needed to access the WebGUI control will also need to be changed accordingly on the web address entry bar.





# TERMS & CONDITIONS OF USE

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.

#### **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, SHALLA-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.