

ANI-9251RX

HDCP 2.2 & HDMI 2.0 Extender with OAR / Audio Insertion
For use with the ANI-1082UHD





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.

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DEAR CUSTOMER

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

INTRODUCTION

The HDMI over single CAT5e/6/7 Receiver is a great solution to extend uncompressed Audio/Video and IP data over a single CAT5e/6/7 cable at a distance up to 328ft (100M). Multi-control interfaces are available which includes IR, RS-232, USB and LAN connection. This extender set complies with advanced protocols of HDCP 2.2 and HDMI 2.0, and HDCP 1.4 is also supported. 6G HDMI video supports and extends 4K2K data with features like “Optical Audio Return” which supports audio from the Receiver. The “audio insertion” allows you to insert external audio into HDMI video for applications such as background music insertion. HDBT clock stretch and TMDS re-clocking are also supported. The Receiver can be powered via the PoH when connected to the ANI-1082UHD. This product has a 3 year warranty.

PACKAGE CONTENTS

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

- ANI-9251RX HDMI over CAT5e/6/7 Receiver
- IR Extender Cable
- IR Blaster Cable
- RS-232 terminal (Phoenix Connector)
- Audio terminal (Phoenix Connector)
- Surface Mount Tab Set
- Users Guide

OPTIONAL

- 48V/0.83A DC power adapter
- Power Cord

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.

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FEATURES

- HDCP 1.4/HDCP 2.2 and HDMI 2.0 compliant
- HDMI with 3D, 4K2K@60Hz support and DVI Compliant
- 6G HDMI video (3840x2160 YUV444) input is supported
- Simultaneous transmission of uncompressed data over a single CAT5e/6/7 cable up to 328ft/100M at 1080p and 230ft/70M at 4K2K@60Hz
- 5Play™ convergence: HDMI, LAN, PoE & Control (IR & RS-232)
- (PoH) Receives power over a CAT cable when connected to the ANI-1082UHD
- Supports output resolution up to 4K2K@50/60Hz (YUV 420)
- Supports deep color input and output of 8 bits, 10 bits and 12 bits
- Supports CEC bypass
- Optical audio return supports audio transmit back from receiver to transmitter
- Audio insertion supports external audio insert to HDMI video such as background music insertion
- Supports EDID management PC software with default EDID and native EDID from display or other sink devices
- Supports HDMI DDC bus clock stretch for better compatibility of some Blu-ray players
- Manages TMDS re-clocking and signal re-generation for better signal stability
- Easy firmware update via USB

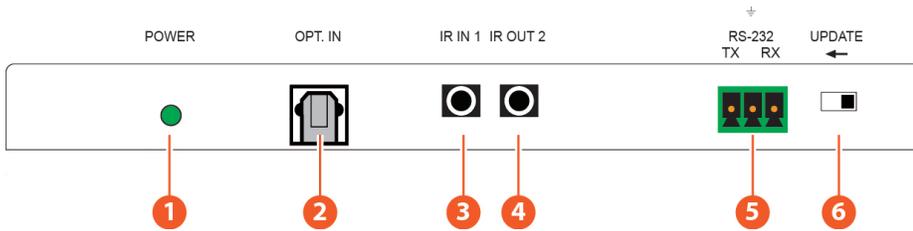
NOTE:

1. A standard 48V PoE function is designed for powering compatible Receiver units only---non-PoE Receivers will need their own power supply. Receivers of another brand may not be compatible.
2. Displaying HDMI 3D and 4K2K content, equivalent source signal and HDMI cable are required in order to secure the quality.

SPECIFICATIONS

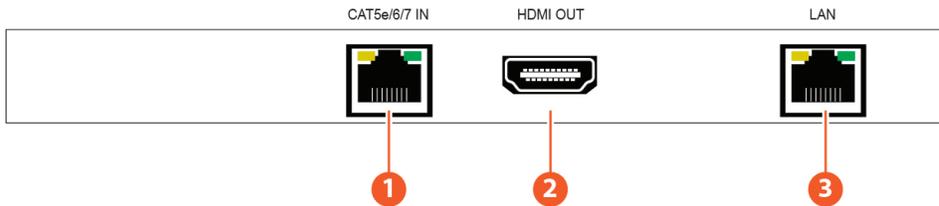
- **Input Ports:**
 - CAT5e/6/7 (RJ45) PoH
 - IR In
 - Optical In
- **Output Ports:**
 - HDMI
 - IR Out 2
- **Other Ports:**
 - LAN (RJ45)
 - RS-232 (Phoenix Connector)
 - Update slide switch
- **Video Bandwidth:** 340MHz / 10.2Gbps
- **HDMI Resolutions:**
 - HD: 480i up to 4K2K@50/60Hz (YUV 420)
 - PC: VGA up to WUXGA
- **HDMI Cable Distance Output:** 33ft (10M) 1080p@8-bit or 12-bit / 16ft (5M) 4K2K@60Hz
- **CAT5e/6/7 Cable Distance:** Up to 328ft/100M at 1080p and 230ft/70M at 4K2K@60Hz
- **RS-232 Baud Rate:** Up to 115200bps
- **IR Frequency:** 30~50kHz
- **ESD Protection:** Human Body model:
 - ± 8kV (air-gap discharge)
 - ± 4kV (contact discharge)
- **Dimensions (WxDxH):** 3 x 6.4 x .6 in (78x163x16mm) / 3 x 7.2 x .6 in (78x183x16mm) including surface mount tabs
- **Weight:** .75 lb (340g)
- **Chassis Material:** Metal
- **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:** 19.5W

FRONT PANEL



- 1 POWER LED:** This power LED will illuminate when receiving power from the transmitter.
- 2 OPTICAL IN:** Connects with an optical audio source as an optical audio return which sends audio to the Transmitter.
- 3 IR IN 1:** IR IN 1 is considered an IR receiver which connects to the supplied IR Receiver cables for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
- 4 IR OUT 2:** IR Out 2 is considered an IR BLASTER which connects to the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
- 5 RS-232:** Connects to the device that is to be controlled (via RS-232 terminal connected with a D-Sub 9-pin cable) by ASCII commands.
- 6 UPDATE:** When updating the firmware, the switch should be moved to the left side. As indicated by the arrows on the case.

BACK PANEL



- 1 CAT5E/6/7 IN:** Connects to the transmitter unit with a single CAT5e/6/7 cable for transmission of all data signals and power.
- 2 HDMI OUT:** Connects to the HDMI sink equipment such as a display.
- 3 LAN:** Connects to your local LAN or device.

D-SUB 9 PIN DEFINITIONS

PIN	DEFINE TX / RX	PIN	DEFINE TX / RX	PIN	DEFINE TX / RX
1	NC	4	N/C	7	N/C
2	TxD / RxD	5	GND	8	N/C
3	RxD / TxD	6	N/C	9	N/C

CAT5E/6/7 CABLE SPECIFICATION

CABLE TYPE	RANGE	PIXEL CLOCK RATE	VIDEO DATA RATE	SUPPORTED VIDEO FORMATS
CAT5e/6/7	328ft (100M)	≤225MHz	≤5.3Gbps (HD Video)	Up to 1080p@60Hz, 36-bit, 3D (data rates lower than 5.3Gbps or below 225MHz TMDS clock)
CAT5e/6 CAT7	229ft (70M) 328ft (100M)	>225MHz	>5.3Gbps (Ultra HD Video)	4K2K@60Hz video formats

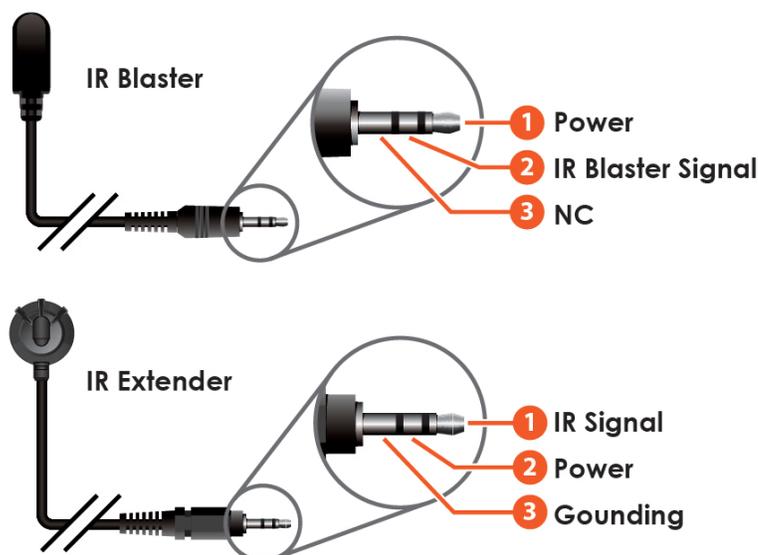
TIMING SUPPORT TABLE

HDMI	INPUT	OUTPUT	HDMI	INPUT	OUTPUT
480i@576i	Supported	Supported	800x600	Supported	Supported
480p@576p	Supported	Supported	1024x768	Supported	Supported
720p@50&60	Supported	Supported	1600x1200	Supported	Supported
1080i@50&60	Supported	Supported	1920x1200	Supported	Supported
1080p@50&60	Supported	Supported	3840x2160p@50/60 (YUV_444)	Supported	Not Supported
640x480	Supported	Supported	3840x2160p@50/60 (YUV_420)	Supported	Supported

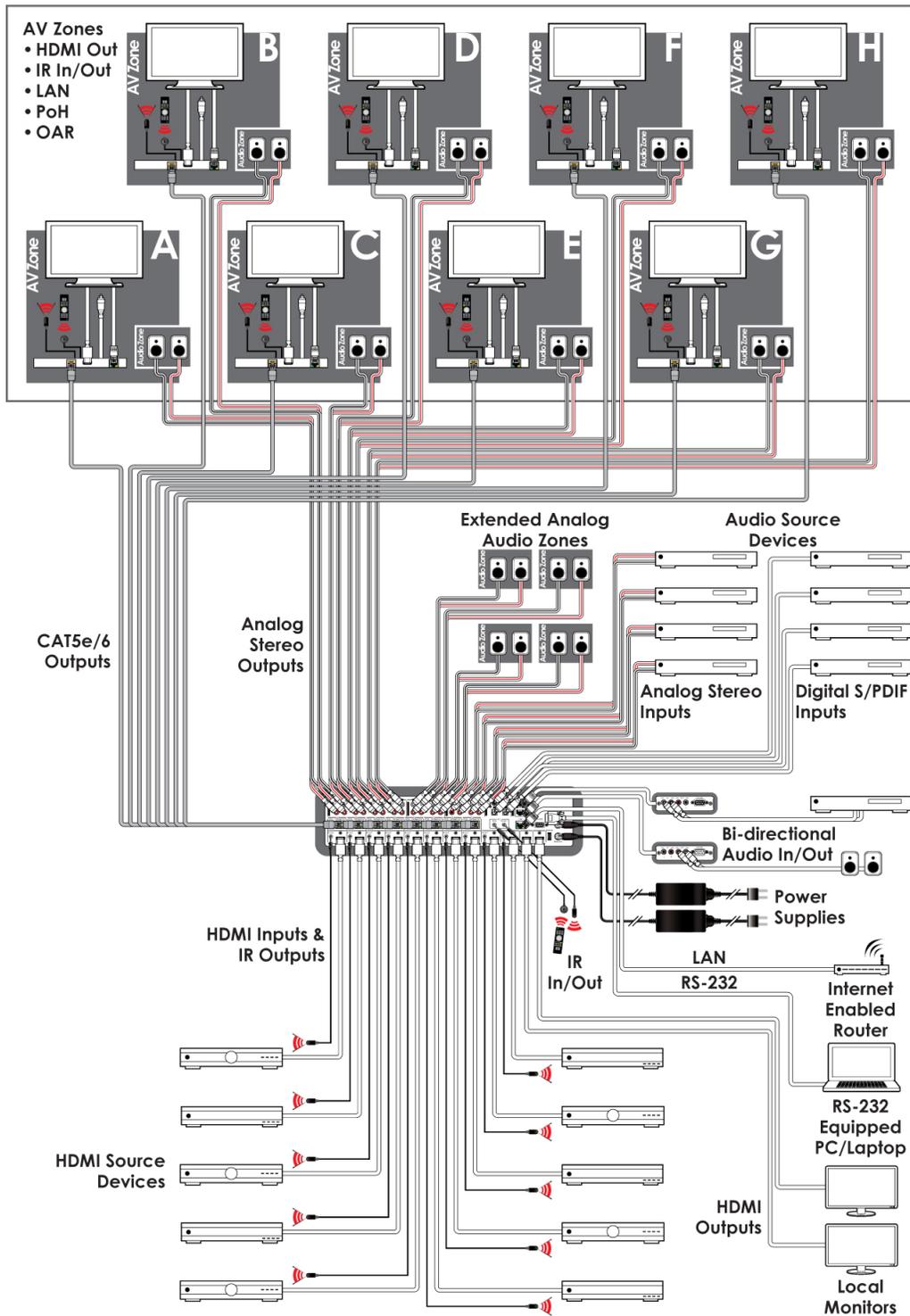
HDBT FEATURES

HDBASET™ FEATURE	SUPPORTED	HDBASET™ FEATURE	SUPPORTED
Video & Audio	Yes	Sends power to Transmitter	No
IR	Yes	Sends power to Receiver	Yes
RS-232	Yes	LAN	Yes

IR CABLE PIN ASSIGNMENT



CONNECTION AND INSTALLATION



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