

# ANI-HDB70X

HDMI Extender over CAT5E/CAT6 (HDBaseT™)





## 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.

THIS SAFETY INFORMATION IS OF A GENERAL NATURE AND MAY BE SUPERSEDED BY INSTRUCTIONS CONTAINED WITHIN THIS MANUAL.

## 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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**INTRODUCTION**

The ANI-HDB70X CAT5E/CAT6 HDMI Extender is a tool which can extend your HDMI signal over 230ft / 70M to a compatible display. It is designed to convert HDMI signal to standard HDBaseT™ signal which can be transmitted by LAN cable. It also supports Transfer Bidirectional Infrared control signal together with the HDMI signal, so you can control the Source in the Sink side which is 230ft outside, also you can control the Sink in the Source side which is 230ft outside by using the HDMI Extender. 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-HDB70T HDMI Extender Transmitter
- ANI-HDB70R HDMI Extender Receiver
- (2) Wideband IR Tx
- (2) Wideband IR Rx
- 24V1A DC Power Supply
- (4) Mounting ears
- Users Guide

# FEATURES / SPECIFICATIONS

## FEATURES

- POC (Power Over Cable) function is supported, either TX or RX is powered by 24V@1A power supply, the another does not need power supply from the DC jack
- POC Power consumption is less than 10W
- Use single UTP LAN cable (CAT5E/6) to substitute HDMI cable to achieve long distance transmission
- UTP termination follows the standard of direct interconnection method
- Transmission distance: Over CAT6 cable
  - 230 ft / 70M: 1080p@60Hz@36bit; 3D 1080p@30Hz@36bit
  - 131 ft / 40M: 1080p@60Hz@48bit; 1080p@120Hz@24bit; 3D 1080p@60Hz@36bit; 4K2K@30Hz@24bit
- Support display resolutions up to 4K2K@30Hz
- Full HD support: 1080p@60Hz@48bit/pixels, 1080p@120Hz@24bit/pixels, 3D 1080p@60Hz and 4K2K@30Hz@24bit
- Transfer Bidirectional Infrared control signal together with the HDMI signal
- Transfer Bidirectional RS-232 control signal together with the HDMI signal

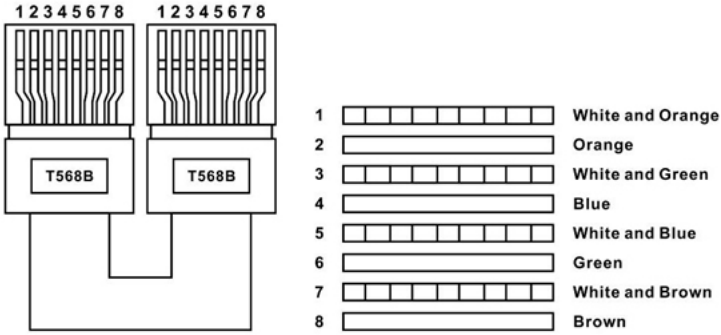
## SPECIFICATIONS

- **Frequency Bandwidth:** 297MHz [10.2Gbps]
- **Transmitter Input/Output:**
  - HDMI Female port / CAT6
  - IR Tx / IR Rx / Phoenix
- **Receiver Input/Output Ports:**
  - HDMI Female port / CAT6
  - IR Tx / IR Rx / Phoenix
- **Power Supply:** DC 24V 1A
- **ESD Protection: Human Body Model:**
  - ±8kV (air-gap discharge)
  - ±4kV (contact discharge)
- **Dimensions (WxDxH):** 2.6 x 4.5 x .7 in (65x115x17mm)
- **Weight (x2):** 7 oz / 200g
- **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 (Max):** 20W

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

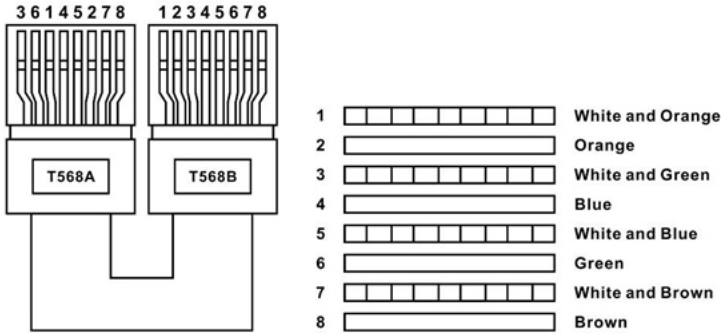
# UTP CABLE TERMINATION

The extender using UTP termination, which follows the standard of direct interconnection method.



## Direct Interconnection Method

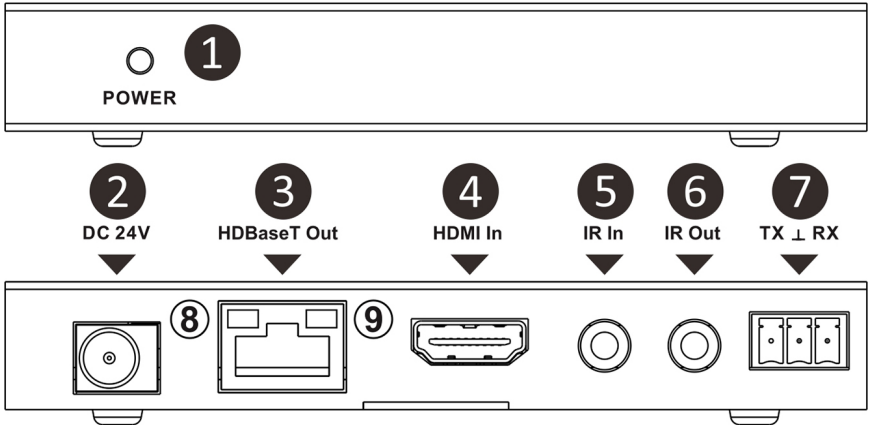
The extender will start protection mode automatically when using UTP termination, which follows the standard of cross interconnection method.



## Cross Interconnection Method

# OPERATION CONTROLS AND FUNCTIONS

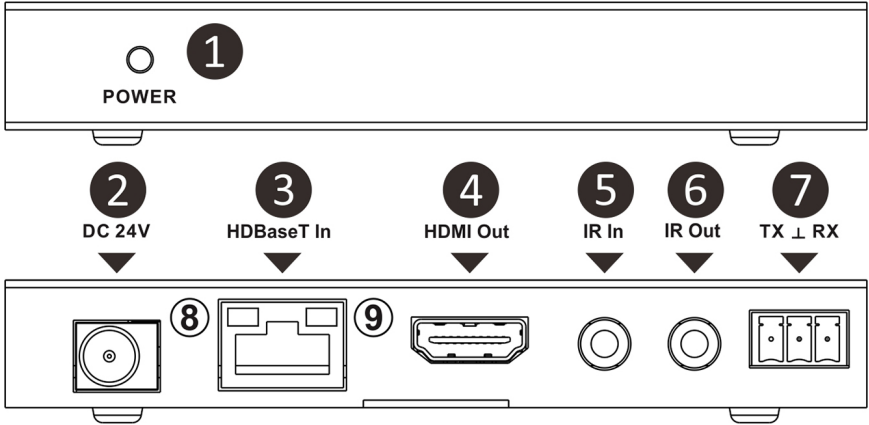
## TRANSMITTER



- ❶ **POWER:** This LED illuminates when the device is connected with power supply.
- ❷ **DC 24V:** Plug the 24V DC power supply into the unit.
- ❸ **HDBaseT™ OUT:** Standard HDBaseT™ signal output port. Connect HDBaseT™ receiver with a UTP cable following the standard of direct interconnection method.
- ❹ **HDMI IN:** HDMI input port. This slot is where you connect the HDMI source.
- ❺ **IR IN:** Channel 2 IR Receiver. Connect with Wideband IR Rx.
- ❻ **IR OUT:** Channel 1 IR Transmitter. Connect with Wideband IR Tx.
- ❼ **RS-232:** Phoenix jack provide Serial port control signal from receiver or to receiver.
- ❽ **CONNECTION SIGNAL INDICATOR LAMP**
  - **ILLUMINATE:** The Transmitter and Receiver are in good connections status.
  - **FLASHING:** The Transmitter and Receiver are in poor connections status.
  - **DARK:** The Transmitter and Receiver are not connected.
- ❾ **DATA SIGNAL INDICATOR LAMP**
  - **ILLUMINATE:** The HDMI signal with HDCP.
  - **FLASHING:** The HDMI signal without HDCP.
  - **DARK:** No HDMI signal.

# OPERATION CONTROLS AND FUNCTIONS

## RECEIVER



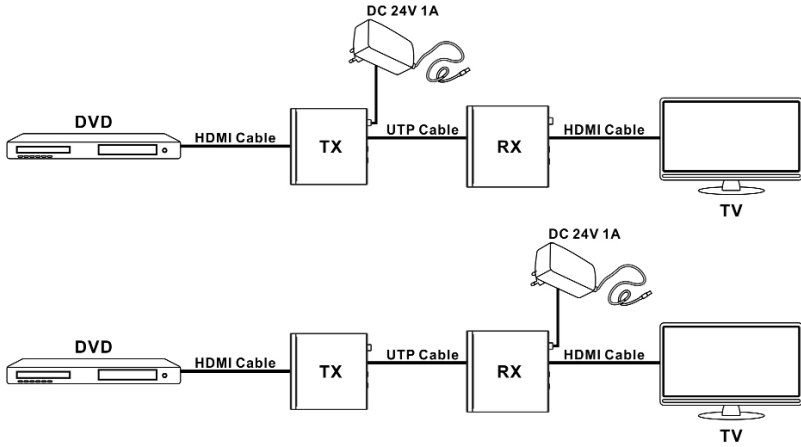
- 1 POWER:** This LED illuminates when the device is connected with power supply.
- 2 DC 24V:** Plug the 24V DC power supply into the unit.
- 3 HDBaseT™ IN:** Standard HDBaseT™ signal input port. Connect HDBaseT™ transmitter with a UTP cable following the standard of direct interconnection method.
- 4 HDMI OUT:** HDMI output port. This slot is where you connect the HDTV or monitor with HDMI cable.
- 5 IR IN:** Channel 1 IR Receiver. Connect with Wideband IR Rx.
- 6 IR OUT:** Channel 2 IR Transmitter. Connect with Wideband IR Tx.
- 7 RS-232:** Phoenix jack provide Serial port control signal from receiver or to receiver.
- 8 CONNECTION SIGNAL INDICATOR LAMP**
  - **ILLUMINATE:** The Transmitter and Receiver are in good connections status.
  - **FLASHING:** The Transmitter and Receiver are in poor connections status.
  - **DARK:** The Transmitter and Receiver are not connected.
- 9 DATA SIGNAL INDICATOR LAMP**
  - **ILLUMINATE:** The HDMI signal with HDCP.
  - **FLASHING:** The HDMI signal without HDCP.
  - **DARK:** No HDMI signal.



# DESCRIPTIONS

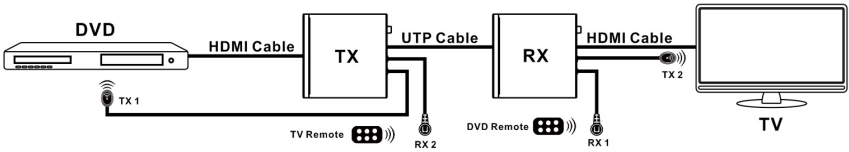
## DESCRIPTION 1

POE (Power Over Ethernet) Application Example.



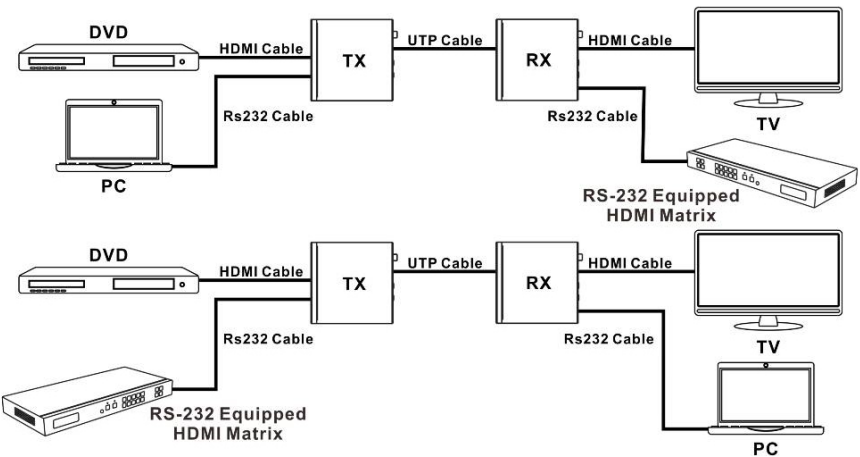
## DESCRIPTION 2

Bi-directional Infrared control Application Example.

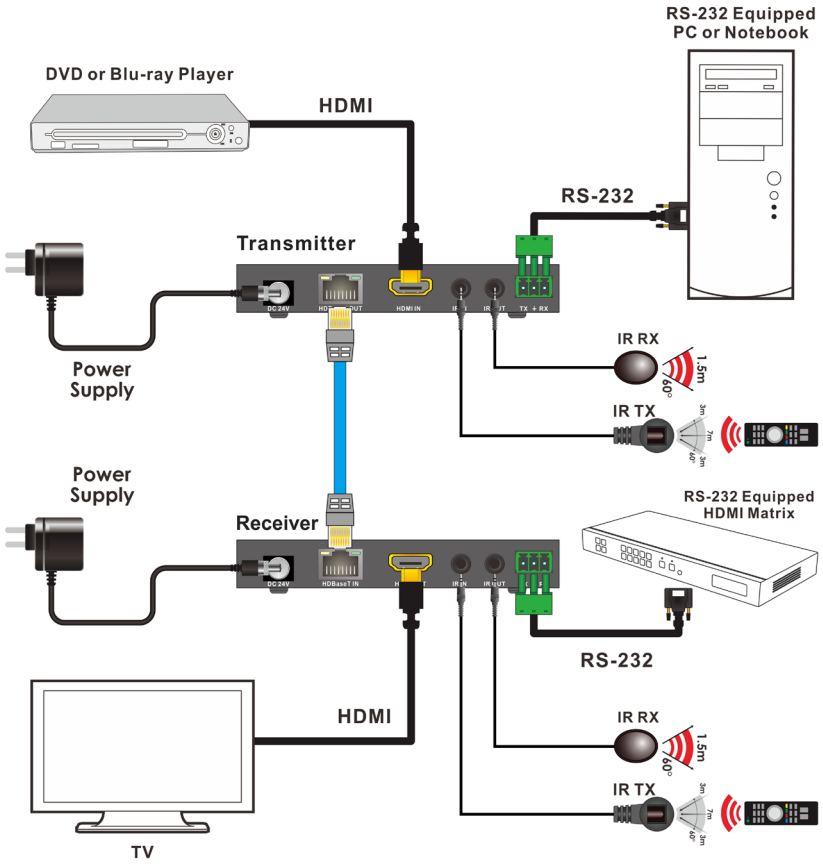


## DESCRIPTION 3

Bi-directional RS-232 control Application Example.



# APPLICATION EXAMPLE



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