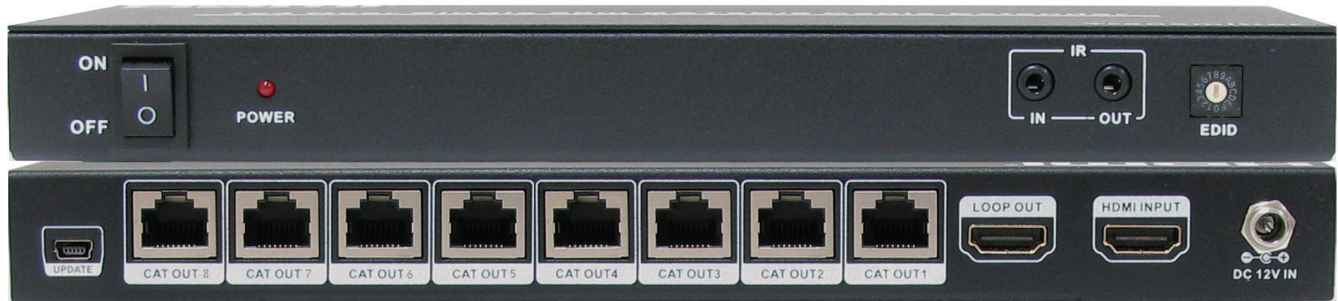![KVMSwitchTech.com logo]

HDMI-CATSPB-8
HDMI 1x8 Splitter Over CAT5e/6 Extender
INSTRUCTION MANUAL

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 qualifier 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

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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-CATSPB-8 Splitter is a product for splitting and extending your HDMI signal over long distances to a compatible display. It is designed to convert the HDMI signal and transmit by CAT5E/6 cable. It also supports Transferring Bidirectional Infrared control signal together with the HDMI signal, so you can control the Source in the Sink side which is 165 feet / 50 meters outside, also you can control the Sink in the Source side which is 165 feet / 50 meters outside using the Splitter.

PACKAGE CONTENTS

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

- HDMI Splitter
- (8) Receivers
- (8) Wideband IR Tx
- (8) Wideband IR Rx
- Users Guide
- 12V 2.5A DC Power Supply adapter
- (8) 5V 1A DC Power Supply adapter

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 & SPECIFICATIONS

FEATURES

- Compliant with HDMI1.3, HDCP 1.2 and DVI 1.0
- Full HD support: 1080p@60Hz@24 bit/pixels
- HDMI local loop out for HDMI input
- Supports LPCM 7.1CH, Dolby True HD, and DTS-HD Master Audio
- Operates for TMDS clock frequencies up to 165MHz
- Use single CAT-5E/6 cable to substitute HDMI cable to achieve long distances transmission
- UTP cable termination follows the standard of IEEE-568B
- Supports EDID control via EDID selector
- Transfer Bidirectional Infrared control signal together with the HDMI signal
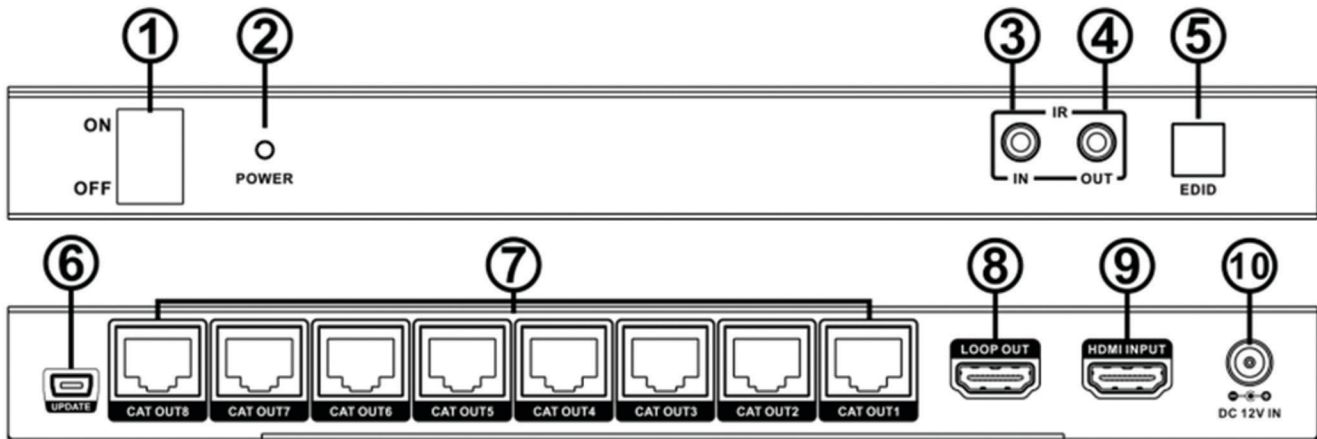
SPECIFICATIONS

- **Frequency Bandwidth:** 1.485 Gbps
- **HDMI Splitter Input/Output Ports:**
  - 2x HDMI Female port
  - 8x CAT6
  - 1x IR Transmitter
  - 1x IR Receiver
- **Receiver Input/Output Ports:**
  - 1x HDMI Female port
  - 1x CAT6
  - 1x IR Transmitter
  - 1x IR Receiver
- **Power Supply:**
  - HDMI Splitter: DC 12V 2.5A
  - Receiver: DC 5V 1A
- **ESD Protection Human Body Model:**
  - ± 8kV (air-gap discharge)
  - ± 4kV (contact discharge)
- **Dimensions:**
  - Splitter (WxDxH): 4.6 x 9.8 x 1.25 in (118x250x32 mm)
  - Receiver (WxDxH): 1.9 x 3.2 x 1 in (49x81x25 mm)
- **Weight:**
  - Splitter: 1.65 lb / 750g
  - Receiver: 5.3 oz / 150g
- **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):**
  - HDMI Splitter: 12W
  - Receivers: 1.5W

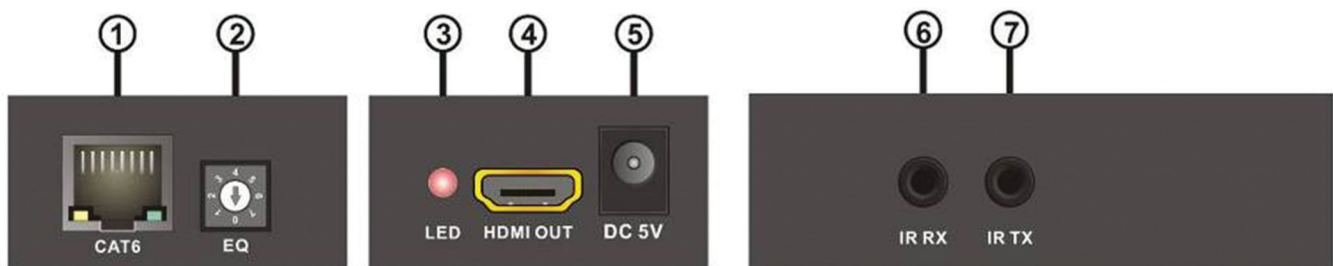Note: Specifications are subject to change without notice.

OPERATION CONTROLS AND FUNCTIONS

SPLITTER

❶ **POWER SWITCH:** Power ON\OFF Switch.

❷ **POWER LED:** This red LED illuminate when the device is connected with power supply.

❸ **IR IN:** IR Control System over CAT5e/6 Cable IR Receiver. Source to SINK, plug Wideband IR Rx into this unit.

❹ **IR OUT:** IR Control System over CAT5e/6 Cable IR Transmitter. SINK to Source, plug Wideband IR Tx into this unit.

❺ **EDID Selector:** Select output signal format via EDID Selector.

❻ **UPDATE:** System software update.

❼ **OUTPUT Area:** Four RJ45 Jacks provide signal output.

❽ **HDMI LOOP OUT:** Local HDMI loop output port.

❾ **HDMI INPUT:** HDMI Input port. Connect source with HDMI cable.

❿ **DC IN:** Plug the 12V2.5A DC power supply into the unit.

RECEIVER

❶ **CAT6:** Connect the CAT input of the receiver with the CAT output of the transmitter with CAT5E/6 cable.

❷ **EQ Selector:** Equalizer selector.See the EQ description.

❸ **LOCK LED:** This red LED will illuminate when the Splitter and Receiver is connected with CAT5e/6 cable.

❹ **HDMI OUT:** HDMI Output port. Connect to TV with HDMI cable.

❺ **DC IN:** Plug the 5V1A DC power supply into the unit.

❻ **IR RX:** IR Control System Over CAT5e/6 Cable IR Receiver. SINK to Source, plug Wideband IR Rx into this unit.

❼ **IR TX:** IR Control System Over CAT5e/6 Cable IR Transmitter. Source to SINK, plug Wideband IR Tx into this unit.

EDID DESCRIPTION

TX EDID DESCRIPTION

Under normal circumstances, a source device (digital and analog) will require information about a connected device/display to assess what resolutions and features are available. The source can then cater its output to send only resolutions and features that are compatible with the attached device/display. This information is called EDID (Extended Display Information Data) and a source device can only accept and read one EDID from a connected device/display. Likewise, the source can only output one resolution for use by a connected device/display.

The EDID switch allows for EDID learning or to pre-set an EDID to encourage a "handshake" between the display and source.

Attention: Please confirm the extender is working normally, when you want to modify the new EDID to source, Toggle the EDID switcher to the corresponding number first, then plug the Transmitter power again. The extender will send the new EDID to source.

EDID TABLE:			
Position	EDID Description	Position	EDID Description
0	1080p, 2CH AUDIO	8	3D,1080p, HD AUDIO
1	1080p, DOLBY/DTS 5.1	9	Copy the HDMI loop out EDID
2	1080p, HD AUDIO	A	1080p, 2CH AUDIO
3	1080i, 2CH AUDIO	B	1080p, 2CH AUDIO
4	1080i, DOLBY/DTS 5.1	C	1080p, 2CH AUDIO
5	1080i, HD AUDIO	D	1080p, 2CH AUDIO
6	3D,1080p, 2CH AUDIO	E	1080p, 2CH AUDIO
7	3D, 1080p,DOLBY/DTS 5.1	F	1080p, 2CH AUDIO

RX EDID DESCRIPTION

RECOMMENDED EQ SETTING	
Position	Cable Length
0 (MIN)-2	under 15m (49.5ft)
3-4	15-30m (49.5 ft - 99ft)
5-6	30-40m (99ft - 132ft)
7(MAX)	40-50m (132ft – 164ft)

If you see flickering or blinking image on the display, adjust the EQ switch to improve the cable skew. MAX stands for the strongest HDMI signal level for the longest possible transmission length while MIN stands for the weakest HDMI signal level for short transmission length. Adjust the signal level from MIN to MAX until desired video quality is displayed.

CONNECT AND OPERATE

APPLICATION EXAMPLE

1. Connect a source such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI input on the Transmitting unit.

2. Connect a display such as an HDTV or HD Projector to the HDMI output on every receiving unit.

3. Connect single CAT5e/6 up to 164ft/50m to the output of the Transmitting unit, and the other end to the input of the every receiving unit.

4. For power, plug both the transmitting unit and receiving unit with the included power supplies.

5. Power on each device in the same sequence (receiver and transmitter will already be powered when either unit is plugged in.)

At this point the display connected should display the source signal connected to the extender set. If no signal is displayed, check the receiver EQ switcher. If a display is having difficulty receiving a signal, see EDID section and perform EDID learning or access the display's menu and adjust the resolution (lowest to highest until signal is displayed). A 24 Hz vertical refresh rate may work better than 60 Hz or higher. Use the source remote at the receiver emitter to test IR functionality. If the IR remote function is not responding, check the emitters to ensure they are placed correctly and are plugged into the correct IR jacks on the Extender set receiving and transmitting units.

WIDEBAND IR (30KHZ---60KHZ) INTRODUCTION

Included in each kit:

IR Receiver

1. IR Signal
2. Power 2.7 to 5.5VDC
3. Grounding

IR Blaster

1. IR Blaster Signal
2. Power 2.7 to 5.5VDC
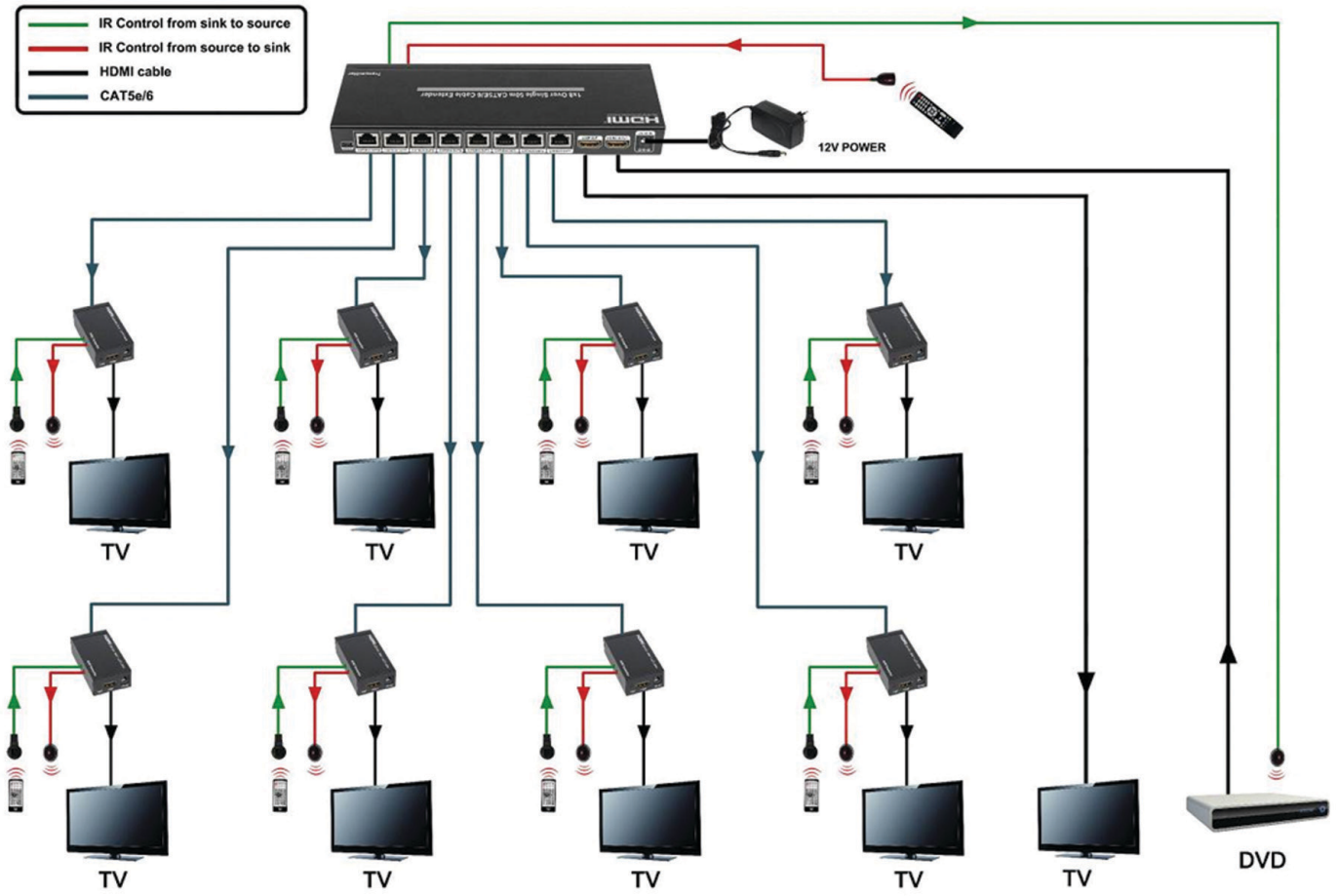3. NC

IR BLASTER (TX):
- **To control the source:** Plug IR Blaster into IR TX port of transmitter unit; place blaster in front of the IR eye of the source.
- **To control the display:** Plug IR Blaster into IR TX port of receiver unit; place blaster in front of the IR eye of the display.

IR RECEIVER (RX):
- **To control the source:** Plug IR Receiver into IR RX port of receiver unit; place receiver at or near display.
- **To control the display:** Plug IR Receiver into IR RX port of transmitter unit; place receiver in position where it is able to receive remote signals.

APPLICATION EXAMPLE

1X8 SPLITTER

Legend:
- IR Control from sink to source
- IR Control from source to sink
- HDMI cable
- CAT5e/6

12V POWER

TV (×9), DVD

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