

HDMI

HDMIE70KVMV2
4K HDMI Extender 70M with KVM, PoC & HDMI Loop Out

User Guide



Important Safety Notice

Thank you for purchasing this Antiference product. Please read the following instructions carefully, retain for future reference and read the following safety considerations:

- 1. Do not place any items on the device
- 2. Ensure no liquids are on or near the device as splashes may damage the unit
- 3. For cleaning, use a damp cloth only without solvents
- 4. Do not attempt to open the case as there is a danger of electric shock
- 5. Repairs should be carried out by a qualified technician
- 6. Place the unit in a well ventilated area to prevent overheating
- 7. Carry out the installation before connecting the device to a source of power
- 8. Use only the supplied power supply as 3rd party products may damage the product

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1. Introduction

This 18Gbps HDMI extender sends a single 4K/HD source to a remote display and a local HDMI display. It sends up to 3840x2160p@60 (4:4:4) resolution signals up to 70m over a single CAT6 cable with HDCP 2.2 support. It supports KVM control (Keyboard, Video, Mouse) so is ideal for the remote control of a PC or server or a CCTV NVR. Other features include EDID copy pass-through system and a PoC system which requires only a single power supply which can be located at either location.

2. Features

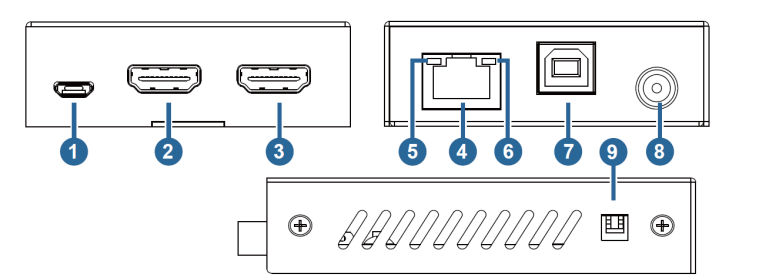
- 18Gbps video bandwidth
- 1 HDMI input, 1 CAT6 output + local HDMI loop through
- Supports resolutions up to 2160p@60 4:4:4 with HDCP2.2
- Extend UHD@60 or 1080p@60 to 70m over a single CAT6 cable
- KVM control system for use with USB server or CCTV NVR
- USB I.I compliant.
- Supports audio de-embedding via 3.5mm jack on receiver.
- EDID management system
- PoC system which can be powered from either location.
- Supports HDR, HDR10, HDR10+, Dolby Vision, HLG
- Audio formats include: LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+).

3. Package contents

1. 1 x Transmitter
2. 1 x Receiver
3. 1 x USB-A to USB-B cable 1.5m
4. 4 x Mounting ears
5. 8 x Machine screws for mounting ears
6. 1 x 12V/1A power adaptor
7. 1 x User guide

4. Operation Controls and Functions

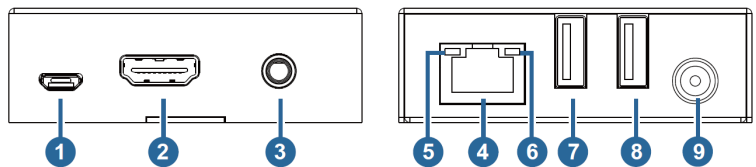
4.1. Transmitter (TX) Panel Description



No.	Name	Function Description
1	SERVICE	Firmware update port.
2	HDMI OUT	HDMI signal loop output port. Connect to HDMI display devices with HDMI cable.
3	HDMI IN	HDMI signal input port. Connect to HDMI source device with HDMI cable.
4	CAT OUT	RJ45 connector for connecting the CAT IN port of the Receiver with CAT6/6a cable.
5	Data Signal Indicator (Yellow)	• Illuminating: HDMI signal with HDCP. • Flashing: HDMI signal without HDCP. • Dark: No HDMI signal.
6	Link Signal Indicator (Green)	• Illuminating: Transmitter and Receiver are in good connection status. • Flashing: Transmitter and Receiver are in poor connection status. • Dark: Transmitter and Receiver are not connected.
7	PC	Connect to PC. The computer can be accessed and controlled remotely through the USB port of the receiver (KVM function).
8	DC 12V	DC 12V/1A power input port. <i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 12V/1A power supply, the other doesn't need power supply.</i>
9	EDID DIP switch	Use the DIP switch to set EDID. (Switching to the upper end indicates 1; switching to the lower end indicates 0.) 11 - EDID information is copied from the display at the RX. 10 - EDID is preset to 4K@60Hz 2.0CH 01 - EDID is preset to 1080p 2.0CH 00 - EDID information is copied from the HDMI OUT at the TX.

4. Operation Controls and Functions (cont)

4.2. Receiver (RX) Panel Description



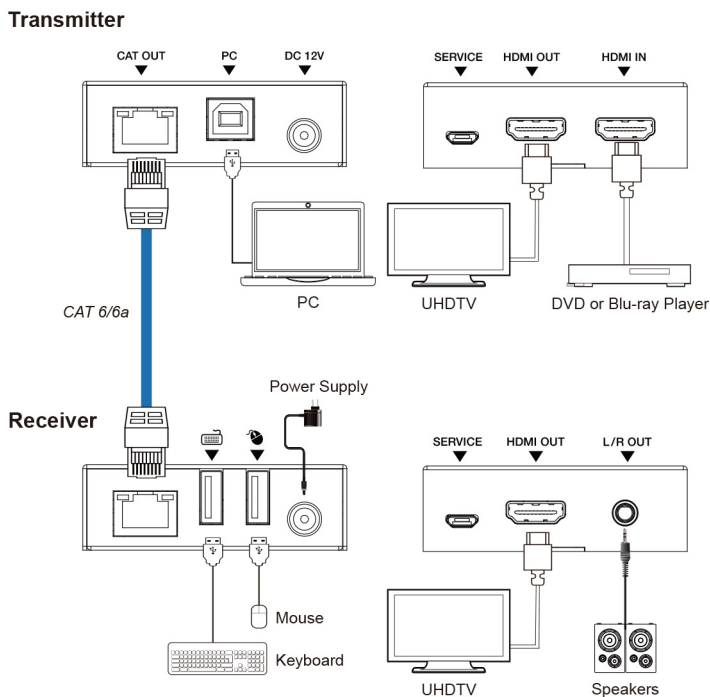
No.	Name	Function Description
1	SERVICE	Firmware update port.
2	HDMI OUT	HDMI signal output port. Connect to HDMI display devices with HDMI cable.
3	L/R OUT	Analog audio output port, used for audio de-embedding output.
4	CAT IN	RJ45 connector for connecting the CAT OUT port of the Transmitter with CAT6/6a cable.
5	Data Signal Indicator (Yellow)	▪ Illuminating: HDMI signal with HDCP. ▪ Flashing: HDMI signal without HDCP. ▪ Dark: No HDMI signal.
6	Link Signal Indicator (Green)	▪ Illuminating: Transmitter and Receiver are in good connection status. ▪ Flashing: Transmitter and Receiver are in poor connection status. ▪ Dark: Transmitter and Receiver are not connected.
7	Keyboard port	Connect to the keyboard.
8	Mouse port	Connect to the mouse.
9	DC 12V	DC 12V/1A power input port. <i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 12V/1A power supply, the other doesn't need power supply.</i>

5. Installation Procedure

5.1. Installation Requirements

1. HDMI source such as PC, server or CCTV NVR/DVR
2. HDMI external display device such as HDTV or monitor
3. UTP/STP CAT6/CAT6A/CAT7 following standard IEE-568B. High quality cables recommended only.

5.2. Installation Example



5. Installation Procedure (cont)

5.3. Network Cable Terminations

- Configure the CAT6 cable RJ45 terminations to IEEE-568B

1 - Orange/white	2 - Orange	3 - Green/white
4 - Blue	5 - Blue/white	6 - Green
7 - Brown/white	8 - Brown	

6. FAQ

Q:Why is there no image on the external display in the remote location?

- A: 1. Check the power supply is connected and the system is running. Check the LED lights on the transmitter and receiver.
2. Check the source input. Is there a signal coming through?

Q:The output image is unstable.Why could this be?

- A: 1. Check that the cable length is within the 70m range when using CAT6
2. Check for cable damages or poor connections
3. By-pass patch panels or wall plate connections if present

Q:The picture is snowy, fuzzy or sparkly

- A: 1. Change the HDMI cable for a shorter one or a new one.

7. Technical Specifications

Audio/Video	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@60Hz RGB/YCBCR 4:4:4
Transmission Distance	4K2K@60Hz 4:4:4 - 70m, 1080p - 70m (CAT6)
Colour Space	RGB 4:4:4 , YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Colour Depth	8/10/12 bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+)
Connections	
Transmitter	Input: 1 x HDMI IN (typeA, 19 pin female) Output: 1 x HDMI OUT (typeA, 19 pin female) 1 x CAT OUT (RJ45) Control: 1 x service (micro USB) 1 X USB port (type-B jack)
Receiver	Input: 1 x CAT IN (RJ45) Output: 1 x HDMI OUT (typeA, 19 pin female) 1 x L/R OUT (3.5mm stereo mini jack) Control: 1 x SERVICE (micro USB) 2 X USB port (type-A jack)
Mechanical	
Housing	Metal Enclosure
Colour	Black
Dimensions	Transmitter/Receiver: 90mm x 68mm x 22mm
Weight	Transmitter/Receiver: 170kg
Power Supply	DC 12V/1A supports bi-directional PoC
Power Consumption	4.2W (max)
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)

Declaration of Conformity

We, ANTIFERENCE LIMITED herewith declare that this Antiference product complies with all essential requirements and any other applicable conditions set forth on directive 2014/30/EU.

According to the WEEE (Waste Electrical and Electronic Equipment) EU Directive, do not dispose of this product as household waste or commercial waste. Waste Electrical and Electronic Equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

A full declaration document can be found on our website www.antiference.co.uk





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