

HDMI Extender

4K Video Extension System

User Manual

Updated March 2023



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System Description

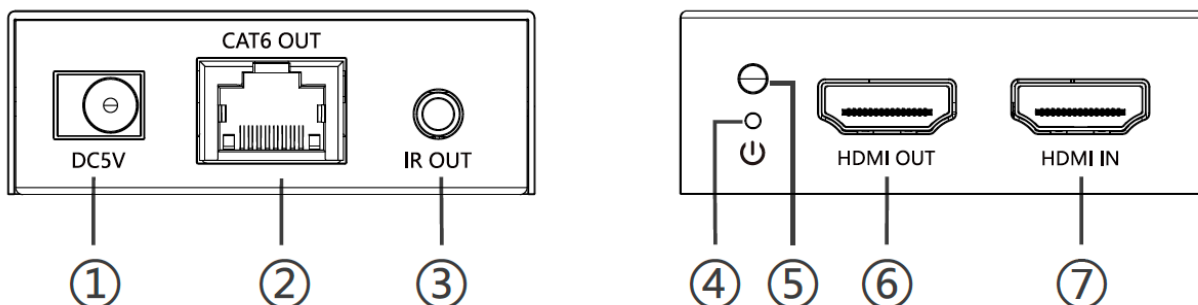
HDMIEXT is point to point HDMI extender kit supporting near zero latency transmission of up to 4K@60Hz video/audio signals over standard Cat6/6A/7 cable. Distances of up to 50m at UHD resolution are supported. The transmitter supports an HDMI loop out. IR passthrough is also supported.

The extender receiver unit is capable of limited scaling of the received stream. If the original stream resolution is greater than the resolution supported by the attached device (As reported by the EDID), the receiver will downscale the stream to 1920 x 1080 resolution at 60 Hz.

Package Contents

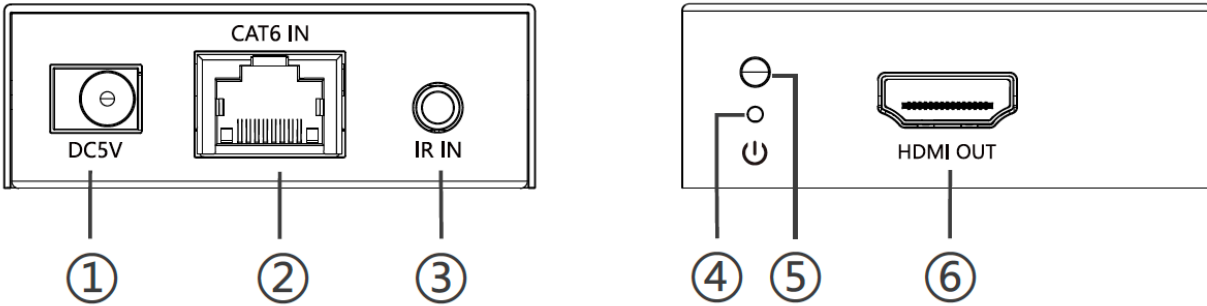
- 1 x Transmitter (HDMIEXT-TX)
- 1 x Receiver (HDMIEXT-RX)
- 2 x Universal power adapters (US, EU, UK, China)
- 1 x IR blaster extension cable
- 1 x IR receiver extension cable

Transmitter Layout



Number	Name	Description
1	Power Input	5V power via Universal power adapter
2	RJ45 Output	Cat6/6a/7 network cable
3	IR Out	IR blaster connection
4	Reset Hole	Pinhole reset
5	Power Indicator	Solid blue when power is applied
6	HDMI Output	HDMI Loop out connector
7	HDMI Input	HDMI Source / Input connector

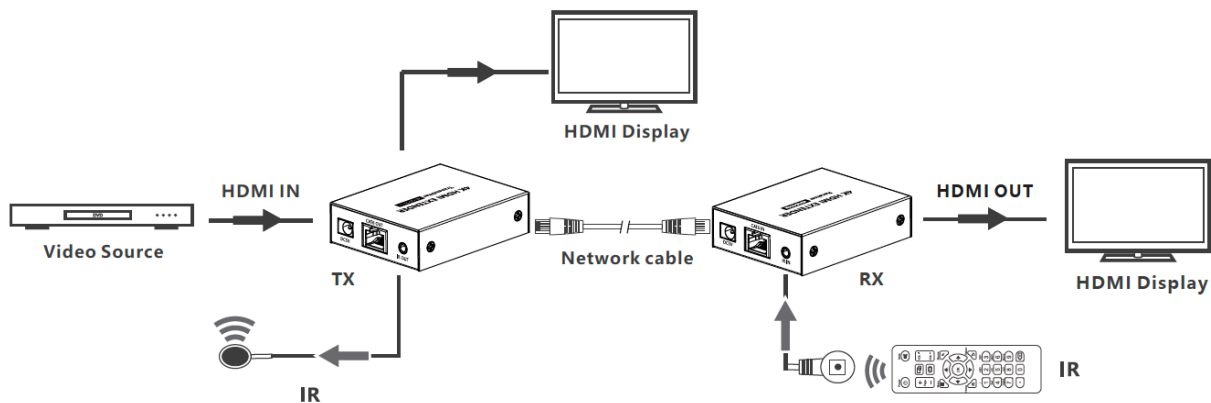
Receiver Layout



Number	Name	Description
1	Power Input	5V power via Universal power adapter
2	RJ45 Output	Cat6/6a/7 network cable
3	IR In	IR receiver connection
4	Reset Hole	Pinhole reset
5	Power Indicator	Solid blue when power is applied
6	HDMI Output	HDMI output connector

Installation

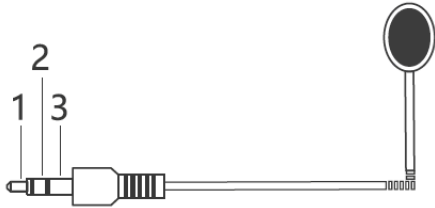
Connection Diagram



Connection Instructions

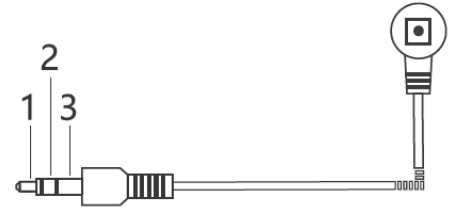
1. Connect the source device to the HDMI IN port of the transmitter with an HDMI cable and connect the HDMI OUT port of the receiver to the display device or other target such as a ZyPer4K Encoder.
2. Use a Cat6/6a/7 cable to connect the RJ45 port of the transmitter and receiver
3. If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
4. If using IR passthrough, the IR blaster extension cable should plug into the IR OUT port of the transmitter. The IR receiver extension cable should plug into the IR IN port of the receiver.
5. Plug the Universal power adapters into the transmitter and receiver.

IR Instructions



IR blaster

1. Power
2. IR Signal
3. Null



IR receiver

1. Power
2. IR Signal
3. Grounding

1. IR blaster extension cable should plug into the IR OUT port of the transmitter. The IR receiver extension cable should plug into the IR IN port of the receiver.
2. The emitter of the IR blaster extension cable should be as close as possible to the IR receiving window of the source device.
3. Point the IR remote control at the receiving head of the IR receiver extension cable to operate.

Specifications

Feature	Transmitter	Receiver
Video		
Input interface	HDMI Type A Female	RJ45 Female
Output interface	HDMI Type A Female RJ45 Female	HDMI Type A Female
Max transfer rate	18Gbps	
Max transmission bandwidth	600MHz	
EDID passthrough	Yes	
Compatibility	HDMI 2.0 (Deep color, HDR, 4:4:4)	
HDCP	HDCP 2.2, HDCP 1.4	
Resolutions	Supports all major VESA resolutions and variations including full HDR* support: 640x480 (p/i) 720x576 (25Hz/50Hz)(p/i) 800x600 (p) 1024x768 (p) 1280x720 (p/i) 1280x1024 (p) 1366x768 © 1440x1080 (p) 1600x1200 (p) 1920x1080 (p/i) 2048x1536 (p) 3440x1440 (p) 3840x2160 (p) Including 4:4:4, 60 Hz support 4096x2160 (p) Including 4:4:4, 60 Hz support (Note: Only supported to 30m maximum) all at 24/25/29.97/30/50/59.94/60Hz refresh rates except where noted	
Transmission Distance	50m maximum	
Audio		
Input interface	HDMI Type A Female	N/A
Output interface	HDMI Type A Female	HDMI Type A Female

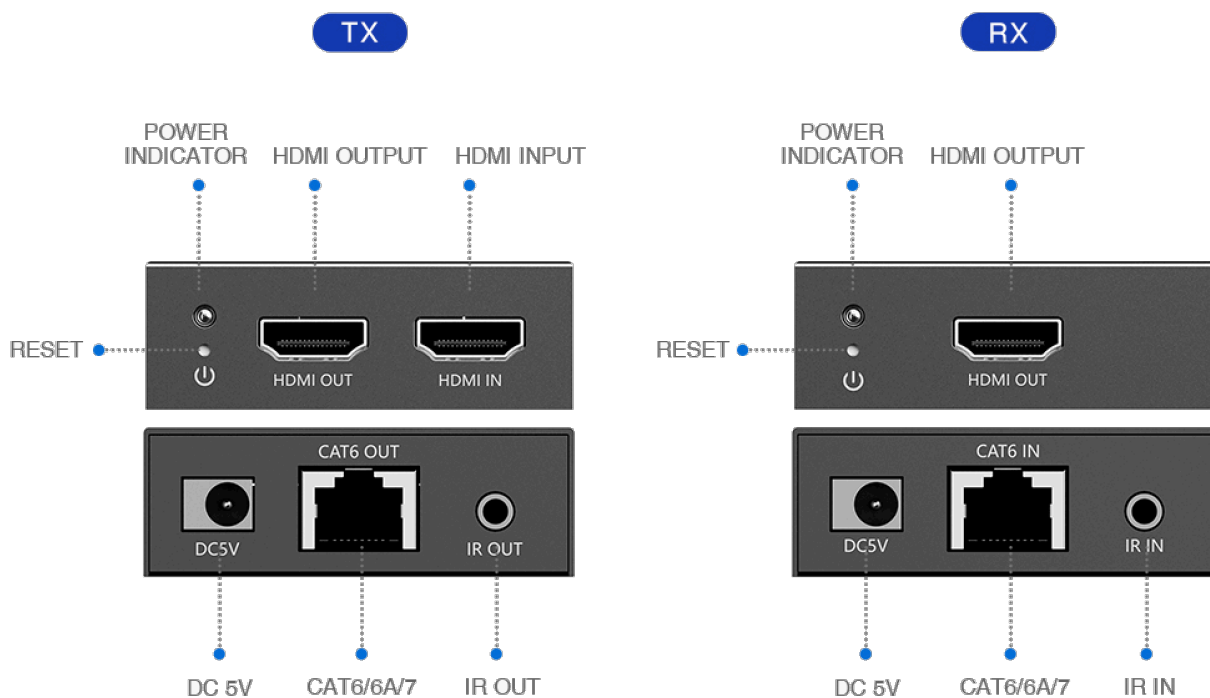
Audio Formats	LPCM up to 8 channels. All encoded audio formats.	
IR Command Signals		
IR interface	3.5mm IR OUT Female	3.5mm IR IN Female
Receiving range	5m	
Infrared frequency	20KHz ~ 60KHz	
Power		
Power Supply	DC5V/500mA	DC5V/500mA
Power Consumption	2.3W	1.5W
Operating Environment		
Operating Temperature	-20°C ~ 60°C	
Storage Temperature	-30°C ~ 70°C	
Humidity	0 ~ 90%RH (No condensation)	
Physical Properties		
Housing	Metal	
Weight	130g	130g
Color	Black	
Dimensions	78mm x 60mm x 21mm	78mm x 60mm x 21mm
Protection	ESD protection 1a Contact discharge level 2 (± 4 KV) 1b Air discharge level 3 (± 8 KV) IEC61000-4-2 Lightning protection Surge protection	

Certifications and Warranty

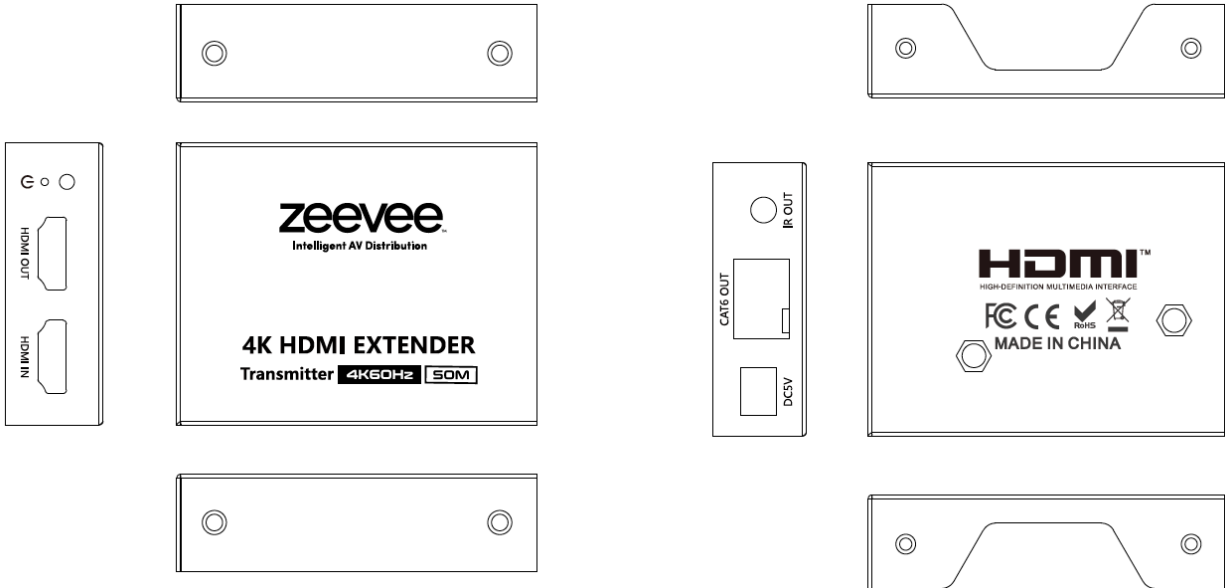
Standard	CE 62368	Yes
	RoHS	Yes
	FCC	Yes, Class B
Warranty	1 year	

Part Numbers

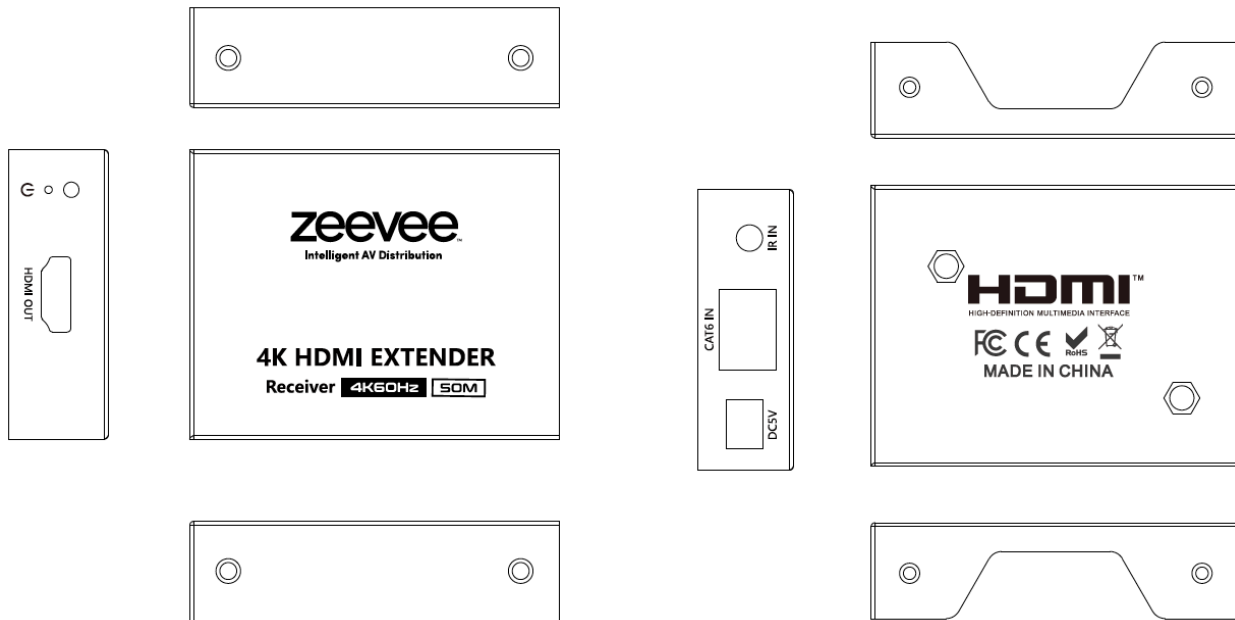
Part Number	Short Description	Long Description
HDMIEXT	HDMI Extender Kit	50M HDMI and IR Extender Pair. Transmitter and Receiver. 4K@60Hz HDR Support. Includes TX, RX, IR TX/RX and Universal power adapters.
HEX-TX	Transmitter	Transmitter portion of HDMI Extender pair. Not orderable individually.
HEX-RX	Receiver	Receiver portion of the HDMI Extender pair. Not orderable individually.



Transmitter



Receiver



Frequently Asked Questions

Question: What imaging technology is used for the data compression and transfer?

Answer: The HDMI Extender uses “ipcolor IMAGE” lossless compression technology.

Question: What is the end to end latency?

Answer: Latency is near zero. Zero frame latency.

Question: How long does it take to sync to a change in input resolution

Answer: Total synchronization time depends of a number of factors and can range from 3-6 seconds.

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