



# LENKENG LKV223 Point to Point Extender User Manual

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**LENKENG LKV223 Point to Point Extender**



## Important Safety Notice

1. Please distinguish the transmitter and receiver before installation.
2. Do not disassemble the machine to repair the product during the working process to avoid electric shock.
3. Please cut off the power before installation. Live installation may damage the equipment.
4. Do not expose the devices to rain, moisture and liquid.  
Use a 5V/500mA DC adapter only. Make sure the specification matched
5. if using 3rd party DC adapters.

## Introduction

This HDMI Extender includes a transmitter unit and a receiver unit, allows the HDMI signal to be transmitted up to 70 meters at 1080p resolution using a Cat6/6A/7 network cable. It adopts a point-to-point connection configuration, supports bi-directional IR pass-back and 3.5 mm stereo audio output. It is perfect for outdoor advertising, monitor system, home entertainment, conference, etc.

## Features

1. Zero latency.
2. Support up to 4K@30Hz resolution.
3. Support CAT6/6A/7 network cables, 1080p@60Hz transmission distance is up to 70 meters, 4K30Hz transmission distance is up to 40 meters.
4. Support bi-directional IR pass-back function (20 60KHz).
5. Support HDRIO.
6. Support EDID passthrough.
7. Transmitter supports HDMI loop-out.
8. Receiver supports 3.5mm stereo audio output.
9. Automatically adjusts parameters to match different network cables and achieve the best display performance.
10. Lightning Protection, Surge Protection, ESD Protection.

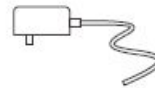
## Package Contents



Transmitter unit x1pc



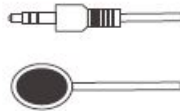
Receiver unit x1pc



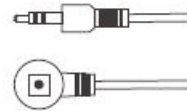
DC5V/500mA  
x2pcs



User manual x1pc



IR blaster extension  
cable x1pc



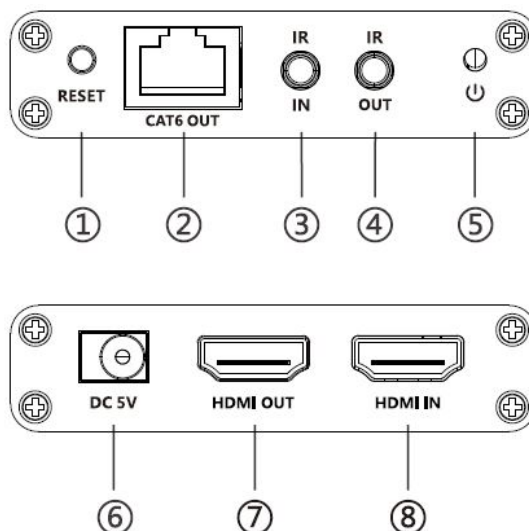
IR receiver extension  
cable x1pc

## Installation Requirements

1. HDMI source device (compute graphics card, DVD, PS3, )HD monitoring equipment etc.
2. HDMI display device like SDTV, HDTV, projector with HDMI port.
3. UTP/STP CAT6/CAT6A/CAT7 cable. Follow standard IEEE-568B,It is recommended to select a network cable with less loss and crosstalk.

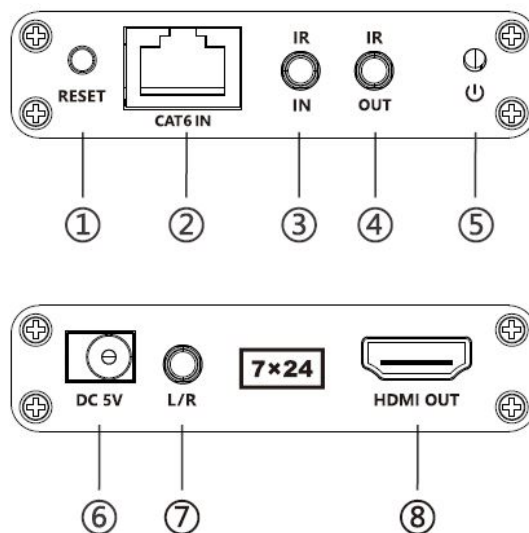
## Interfaces

### Transmitter (TX)



1	Reset button	Press to restart the device
2	RJ45 signal output	Output modulated HDMI signal.
3	IRin	Connect the IR receiver extension cable to ensure that the remote control used is within the range of the IR receiving device.
4	IR out	Connect the IR blaster extension cable, please keep the infrared transmitter as close as possible to the signal source device when using.
5	Power/Signal indicator	<p>a. When power is on and no HDMI signal is transmitted, the indicator flashes.</p> <p>b. When power is on and HDMI signal is transmitted, the indicator is always on.</p>
6	DC 5V input	Connect to the 5V500mA DC power adapter.
7	HDMI output	Connect to a local HDMI display device.
8	HDMI input	Connect to a HDMI source device.

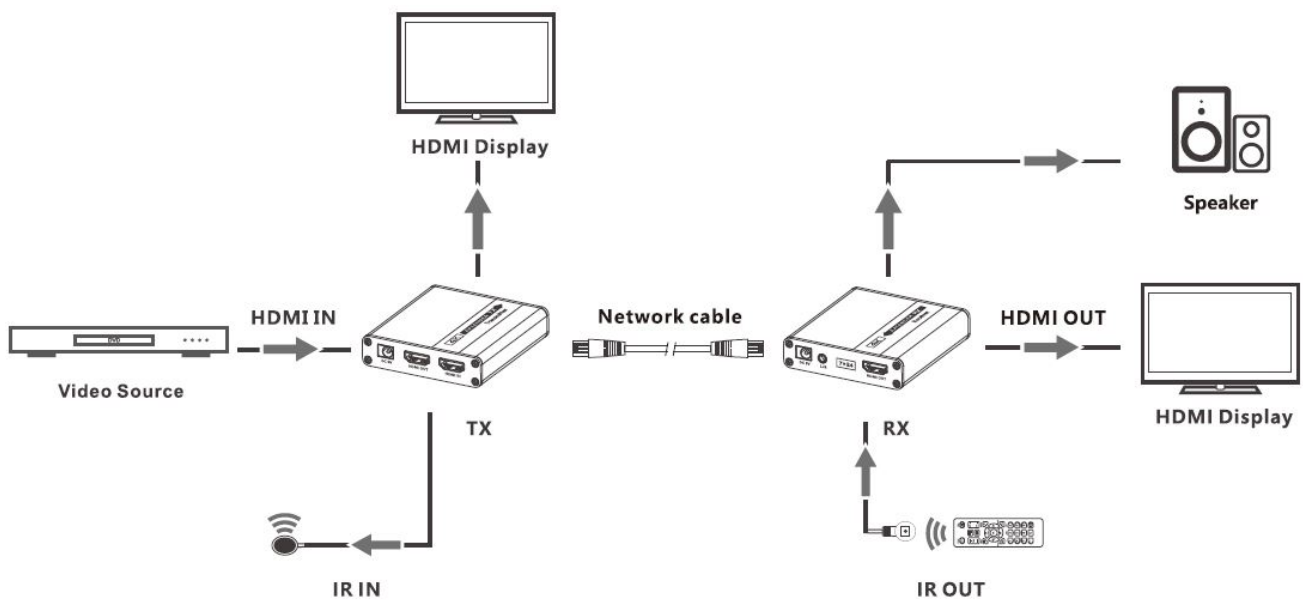
## Receiver (RX)



CD	Reset button	Press to restart the device
1	RJ45 signal input	Input modulated HDMI signal.
2	IR in	Connect the IR receiver extension cable to ensure that the remote control used is within the range of the IR receiving device.
3	IR out	Connect the IR blaster extension cable, please keep the infrared transmitter as close as possible to the signal source device when using.
4	Power/Signal indicator	a. When power is on and no HDMI signal is transmitted, the indicator flashes. b. When power is on and HDMI signal is transmitted, the indicator is always on.
5	DC5V input	Connect to the 5V500mA DC power adapter.
6	3.5mm L/R out	Connect headphones or power amplifiers to output stereo audio.
7	HDMI output	Connect to a HDMI display device.

## Installation Procedures

### Connection



**Note:** When using the 3.5mm stereo audio jack, please switch the audio output format of the signal source to PCM format.

The network cable should follow the standard of IEEE-568B. It is recommended to select a network cable with less loss and crosstalk.

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



### Connection instruction

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 with another HDMI cable.
2. Connect the CAT out port of the transmitter and the CAT in port of the receiver via a network cable (CAT6/CAT6A/CAT7).
3. If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
4. Plug the power supply into the device to get started.

**NOTE:** It is recommended to use a length range within 2-00m network cable. If the cable is too short, there may be no display output because the signal is too strong. If the cable is too long, the output may be with poor quality.

## IR User Guide

1. IR blaster extension cable should plug in the IR OUT port of the transmitter or receiver, IR receiver extension cable should plug in the IR IN port of the transmitter or 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. Face the receiving head of the IR receiver extension cable to the user for convenient remote control.

## FAQ

### Q: There is no output on screen when all connections are correct?

1. Please make sure the HDMI cables support the resolution of the output signal from the source device.
2. Please check and make sure the network cable inserts to the Rj45 port well.
3. Restart the transmitter or receiver by pressing the reset button.

### Q: Black screen happened on the display/monitor?

1. Check if the length of the cable is within the specified range.
2. Reset the transmitter to rebuild the connection.

### Q: The display shows unusual color or no sound?

1. Reset the transmitter or receiver to rebuild the connection.
2. Check if the HDMI cables are connected well.
3. Reconnect the network cable.

## Specification

Items		Specification
Power Supply	Voltage/Current	DC5V/500mA
	<b>Power consumption</b>	TX < 2.5W RX < 2.5W
	HDMI compliance	HDMI1.4
	HDCP compliance	HDCPI.4

HDMI <b>Performance</b> And Interface		800×600. 1024 x768 . 1280 x720. 1280×960. 1366×768 . 1440×900 . 1680×1050 . 1920×1080 . 480i@60Hz. 48 0p@60Hz. 576i @ 50Hz. 57 6p@ 50Hz. 720p @ 50/ 60Hz. 1 080i@ 50/ 60Hz . 1080p @24/ 25/ 30/ 50/ 60Hz . 384 0x2160 @24/ 25/ 30Hz
	HDMI resolution	
HDMI <b>Performance</b> And Interface	Supports audio formats	PCM, LPCM, DTS HD, DTS Audio
	Input and output TMDS signal	0.7 ~1.2Vp – p(TM DS)
	<b>Input and output DDC signal</b>	SVp-p(TTL)
	Input cable length	5 8m(AWG24)
	Output cable length	5 8m(AWG24)
<b>Transmission</b> Distanc e	Cat6/6A/7	1080p@60Hzs 70m 4K@ 30Hz 540m
Protection Level	Electrostatic protection of the whole machine	Implementation of the standard: IEC61000-4-2 1a Contact discharge level 2 (4KV) 1b Air discharge level 3 (8KV)
Operating <b>Environment</b>	Working temperature	-20- 60℃
	Storage temperature	-30~ 10℃
	Humidity (no condensation)	0 ~ 90%R H
Bod y <b>Properties</b>	<b>Dimension</b>	75.0(L) x 80.0(W) x 18.0(H)mm
	Material	Aluminum alloy material + crystal panel
	Treatment process	Grit blast
	Color	Black
	Weight	TX: 160g RX:160g

#### Disclaimer


The product name and brand name may be registered trademark of related manufactures. TM and @ may be omitted on the user manual.

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reliability, function or design.

**Documents / Resources**



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LKV223 Point to Point Extender, LKV223, Point to Point Extender, Point Extender, Extender