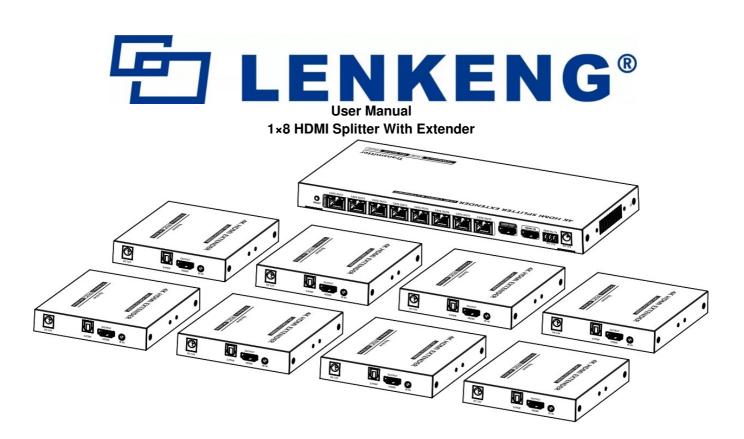


# LENKENG LKV828P-I 1×8 HDMI Splitter with Extender User Manual

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### LKV828P-I 1×8 HDMI Splitter with Extender

#### · Important safety notice

- 1. Do not expose this device to rain, moisture and liquid.
- 2. Do not put any stuff into the device.
- 3. Do not disassemble or repair this device without qualified service technician.
- 4. Make sure the specification matched if using 3rd party DC adapters.

#### Introduction

This product is a 1 input 8 outputs extender splitter kit, which integrates the functions of distribution and extension. It distributes 1 HDMI input signal to 8 identical signal outputs, extends these signals up to 70 meters, and supports 4K60Hz resolution. It also supports IR passback, RS-232 control and other functions. It is suitable for studios, multimedia classrooms, rail transit, etc.

#### **Features**

- 1. Zero latency transmission.
- 2. Split and extend one HDMI input signal to eight identical network output signals.
- 3. Support up to 4K@60Hz resolution.
- 4. Transmission distance up to 70 meters by using Cat6/6A/7 cables.
- 5. Support IR passback (20KHz~60KHz).
- 6. The transmitter supports HDMI loop out.
- 7. The receiver can output the digital audio of the TV or source device from the S/PDIF port.
- 8. Support EDID passthrough or manually set the EDID of the product.
- 9. Support RS-232 command control.
- 10. Surge Protection, Lightning Protection, ESD Protection.
- 11. Equipped with rack mount ears.
- 12. Support PoC, only the transmitter is required to supply power.

#### **Package Contents**



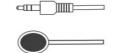




HDMI splitter extender TX x1pcs

HDMI splitter extender User manual x1pcs RX x8pcs







DC12V/5A x1pcs

cable x1pcs

IR blaster extension IR Receiver extension cable x8pcs



Terminal block (RS-232) x1pcs



Mounting brackets x16pcs



Mounting brackets x2pcs



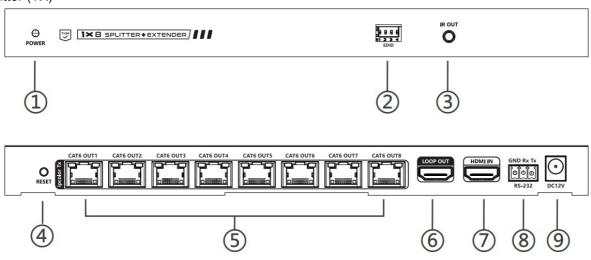
Screw x40pcs

## **Installation Requirements**

- 1. HDMI source device (PC, DVD, play station, etc.
- 2. HDMI display device (TV, monitor, projector, etc.)
- 3. UTP/STP CAT6/CAT6A/CAT7 cable. Follow standard IEEE-568B. It is recommended to choose high-quality network cables.

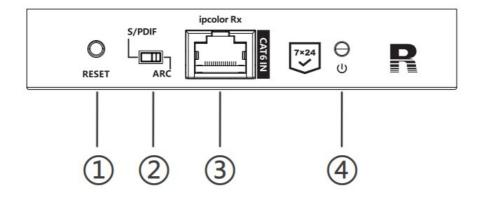
## **Panel Description**

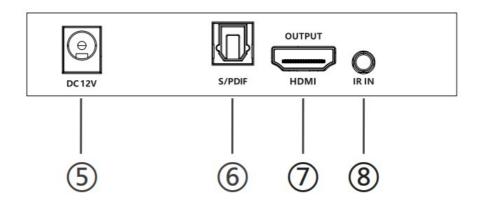
#### Transmitter (TX)



1	Power indicator	The indicator will turn blue when the power is turned on	
2	EDID DIP switch	Set output resolution through EDID DIP switch	
3	IR out	Connect with IR blaster extension cable	
4	Reset button	Restart the device	
5	RJ45 output port	Connect with Cat6/6A/7 network cables	
6	HDMI output port	Connect with local HDMI display device with HDMI cable	
7	HDMI input port	Connect with HDMI source device with HDMI cable	
8	RS-232 Port	Connect with the external device to control the transmitter.	
9	Power	Connect with DC 12V/5A power adapter	

# Receiver (RX)





1	Reset button	Restart the device
2	Audio switch	Choose the audio source (output from the S/PDIF port) S/PDIF: from the source device ARC: from the TV (receiver end)
3	RJ45 signal input	Connect with Cat6/6A/7 network cables
4	Power/Signal indicator	When there is power and no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue
5	Power	PoC (Powered by TX)
6	S/PDIF output	Connect with speaker or amplifier
7		Connect with HDMI display device
8		Connect with IR receiver extension cable

## **Installation Procedures**

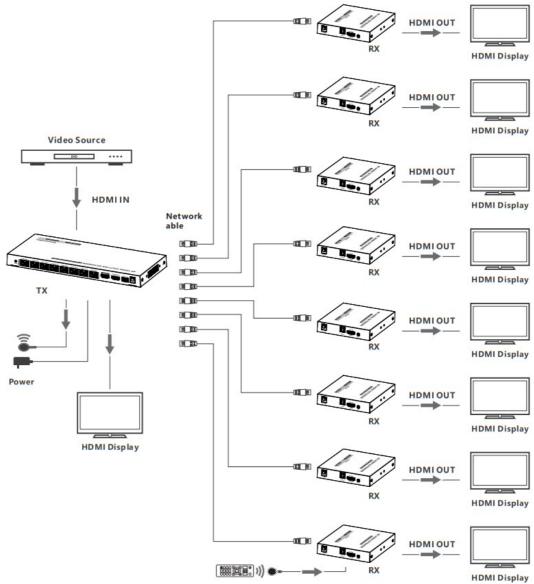


# 1. Network cable

Follow the standard of IEEE-568B:

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

## 2. Connection



#### 3. Connection instructions

- 1. Connect the source device to the HDMI IN port of the transmitter through an HDMI cable.
- 2. Connect the CAT6 OUT ports of the transmitter to the CAT6 IN port of the receivers through the network cables.
- 3. Connect the HDMI OUTPUT port of the receivers to the display devices through HDMI cables.
- 4. If using HDMI loop out, connect the LOOP OUT port of the transmitter to the display through an HDMI cable.
- 5. If using the RS-232 control, connect the RS-232 port of the transmitter to an external device.
- 6. Plug the power into the devices to get started.

#### 4. IR User Guide

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

#### **Function setting**

1. RS232 settings

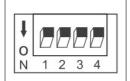
The default configuration is as follows:

Baud rate: 9600 Data bits: 8 Stop bits: 1 Parity: 0

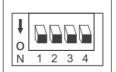
Control Commands	Function Descriptions		
ES XX On [Enter]	Turn on the network signal output port(s), choose from "01" to "0 8" (the network ports from left to right are: 01, 02, 03, 04, 05,06, 07,08.); "All" means all four ports		
ES XX Off [Enter]	Turn off the network signal output port(s), choose from "01" to "0 8" (the network ports from left to right are: 01, 02, 03, 04, 05,06, 07,08.); "All" means all four ports		
Reset [Enter]	Restart the device		
Recover [Enter]	Restore device factory settings		
Baud XX [Enter]	Set the baud rate value: 9600 (default), 19200, 38400, 57600, 115200		
Examples of control commands are shown be	elow:		
Control Command	ES 04 On [Enter]		
Function Description	Trun on network signal output port 04		
Datum Valua	Received successfully	ES 04 On OK	
Return Values	Receive failed	ES 04 On FAIL	
Control Command	ES All Off [Enter]		
Function Description	Turn off all the network signal output ports		
Datum Values	Received successfully	ES All Off OK	
Return Values	Receive failed	ES All Off FAIL	
Control Command	Reset [Enter]		
Function Description	Restart the device		
D. W.	Received successfully	Reset OK	
Return Values	Receive failed	Reset FAIL	
Control Command	Baud 19200 [Enter]		
Function Description	Set the baud rate value: 19200		
	Received successfully	Baud 19200 OK	
Return Values	Receive failed	Baud 19200 FAIL	

## 2. EDID settings:

There are 16 built-in EDIDs in the product, which can be switched through the DIP switch. The upward DIP switch indicates "1", and the downward DIP switch indicates "0".



Switch up for "1"



Switch down for "0"

Switch Status				EDID Information
1	2	3	4	EDID Information
0	0	0	0	4K@60Hz 2CH
1	0	0	0	4K@60Hz 5.1CH
0	1	0	0	4K@60Hz 7.1CH
0	0	1	0	4K@60Hz HDR 7.1CH
0	0	0	1	4K@30Hz 2CH
1	1	0	0	4K@30Hz 5.1CH
1	0	1	0	4K@30Hz 7.1CH
1	0	0	1	4K@30Hz HDR 7.1 CH
0	1	1	0	1080p@60Hz 2CH
0	1	0	1	1080p@60Hz 5.1CH
0	0	1	1	1080p@60Hz 7.1CH
1	1	1	0	1080i@60Hz 2CH
1	1	0	1	1080i@60Hz 5.1CH
1	0	1	1	1080i@60Hz 7.1CH
0	1	1	1	1080p@60Hz HDR 7.1CH
1	1	1	1	Auto

#### **FAQ**

#### Q: Why there is no image output on the display device?

- A: 1) Please check the power supply and all the cables are well-connected.
- -2) Please check whether there is an HDMI signal input.
- -3) Please make sure that the corresponding network port output is not turned off by the RS-232 command.

#### Q: Why is the output image unstable?

- A: 1) Please check whether the length of the network cable is within 70 meters.
- -2) Press the "reset" button on TX and RX panels to restart and reconnect.

#### Q: Why does the TV have a snowy/fuzzy screen?

- A: 1) Please change the HDMI cable or use a shorter HDMI cable.
- 2) The recommended length of the HDMI cable connected to the transmitter is  $\leq$ 3 meters, and the recommended length of the HDMI cable connected to the receiver is  $\leq$ 5 meters.

## **Technical Parameters**

Item	Specification
Transmission protocol	ipcolor
Distribution mode	1 IN 8 OUT
Transmission distance	CAT6/6A/7570m
HDMI signal	HDMI 2.0, HDCP 2.2
HDMI Resolution	480i@60Hz, 480p@60Hz, 576i@50Hz, 576p@50Hz, 720p@50/60Hz, 10801@50/60Hz, 1080p@50/60Hz, 1280×960, 1280×800, 1280×768, 1680×1050, 1360×768, 1366×768, 1600×900, 1024×768, 800×600, 3840×2160@24/25/30/50/60Hz, 4096×2160@24/25Hz
Audio formats	LPCM/DTS-HD/DTS-Audio/Dolby Digital 5.1
IR	Support IR passback function (20KHz-60KHz)
RS-232	3 pin: TxD-RxD-GND, follows RS-232 levels
Working temperature	-20-60°C
Storage temperature	-30-70°C
Humidity (no condensation)	0-90% RH
Protection	ESD protection 1 a Contact discharge level 2 1 b Air discharge level 3 Implementation of the standard: IEC61000-4-2
	Lightning protection
	Surge protection
Power supply	TX: DC12V/5A
Power consumption	TX+ RX < 50W
Material	Iron
Color	Black
Weight	TX:731g RX: 243g
Dimension	TX: 264.0(L) x 120.0(W) x 23.0(H)mm RX:105.5(L)x 102.5(W)x 20.0( H) mm

#### **Disclaimer**

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