



# **HDMI IP POE Extender Set, 4K/60Hz**



**Installation Guide**  
**DS-55353, DS-55354**

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## Important Safety Instructions:

- Do not mix up the HDMI Extender Sender and HDMI Extender Receiver, and the IR Blaster and IR Receiver
- Do not plug in/out the cables when it is in use
- The set don't need additional power supply while use with POE-Switch. In case you want to use extra power supply, use DC 5V power supply only. Make sure the specification matches if using 3rd party DC adapters
- Supports and compliant with IEEE802.3af international standard POE switch. The maximum wattage of the transmitter or receiver is 10W

# 1. Introduction

The HDMI IP Extender Set, 4K/60Hz enables the transmission of HDMI AV signals in ultra-high-definition 4K quality (4096x2160p at 60Hz) over long distances of up to 200 meters - thanks to the powerful point-to-point connection via a CAT6 network cable or higher. The set is fully powered via a POE network switch, external power supply units are not required.

Expansion via IP allows the system to be scaled flexibly and supports up to 253 receivers (displays) for point-to-multipoint transmission. In addition, the existing 1G network infrastructure can be used so that an unlimited signal range is possible by cascading via network switches.

For even greater flexibility, additional receivers (RX) are available separately (model: DS-55354). The excellent picture quality is always maintained: Thanks to a low latency of just 150-220 ms, transmission is smooth and razor-sharp in UHD.

Another practical feature is the integrated IR interface, which enables remote control of the input source directly from the output screen. The device is also suitable for wall mounting, which allows space-saving installation.

Ideal for professional AV applications, home cinema setups or use in companies - this HDMI IP extender set combines the highest transmission quality with maximum flexibility.

## **2. Main Features**

- Long range: AV signal transmission via CAT6 (or higher) cable up to 200 m – Point-to-point connection
- Expandable via IP: Supports up to 253 receivers (displays) – Point-to-multipoint connection
- Flexible & powerful over IP: Use of existing 1G network infrastructure or use of additional 1G network switches for signal transmission at unlimited distance possible – Cascading
- Expansion options: Additional receivers (RX) available separately (model: DS-55354)
- Flexible installation thanks to POE support: Complete power supply via PoE network switch – No external power supply units required
- Outstanding picture quality: Transmission in UHD of up to 4K/60Hz (4096x2160p) with low latency of 150-220 ms
- IR interface enables remote control of the input source from the output screen
- Supports CAT6 (or higher) network cables
- Suitable for wall mounting

## **3. Package Content (DS-55353)**

- 1x Transmitter unit
- 1x Receiver unit
- 2x IR cable/extension (1.0 m)
- 1x Operating instructions

## 4. Specification

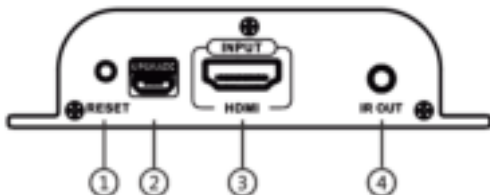
Item	Transmitter	Receiver
<b>Video</b>		
<b>Input interface</b>	1x HDMI	1x RJ45
<b>Output interface</b>	1x RJ45	1x HDMI
<b>HDMI length</b>	5 m max.	5 m max.
<b>Maximum transfer rate</b>	18 Gbps	
<b>Compatibility</b>	HDMI 2.0	
	HDCP 1.4/ HDCP 2.2	
<b>Resolutions</b>	4096x2160@24/30/50/60Hz, 3840x2160@24/30/50/60Hz, 1080P@24/25/30/50/60Hz, 720P@50/60Hz, 576P@60Hz, 480P@60Hz, 1920x1200, 1680x1050, 1600x900, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600	
<b>Connection types</b>	One-to-one connection One-to-many connection (by network switch) Cascading (by network switch)	
<b>Transmission distance</b>	One to one: 200 m over CAT6 (or higher)	
	One to many: 120 m over CAT6 (or higher)	

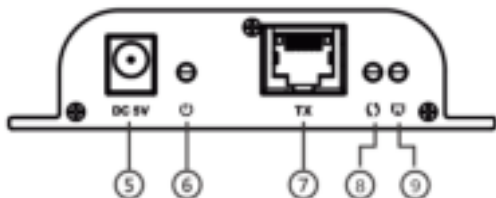
Transmission latency	1080P: 80-130 ms 4K/60Hz: 150-220 ms	
Audio Signal		
Input interface	1x HDMI	1x RJ45
Output interface	1x RJ45	1x HDMI
HDMI output	LPCM 2.0	
3. 5mm L/R output	PCM	
Command Signal		
IR interface	1x 3.5mm IR Out	1x 3.5mm IR In
IR receiving range	5 m max.	
IR frequency	20 kHz – 60 kHz	
Power		
Power Supply	DC 5V/1A	DC 5V/1A
Power Consumption	TX ≤ 3.5W	RX ≤ 2.5W
Operating Environment		
Working temperature	- 20°C - 60°C	
Storage temperature	- 30°C - 70°C	
Humidity	0 - 90% RH (no condensation)	
Physical Properties		

<b>Housing</b>	Metal	
<b>Weight</b>	TX: 166 g	RX: 164 g
<b>Color</b>	Black	
<b>Dimensions</b>	96.8 (L) x 94 (W) x 23.7 (H) mm	
<b>Protection</b>	ESD protection 1a Contact discharge level 2 ( $\pm 4\text{KV}$ ) 1b Air discharge level 3 ( $\pm 8\text{KV}$ ) Implementation of the standard: IEC61000-4-2	
	Lightning protection, Surge protection	

## 5. Interfaces

### 5.1 Transmitter (TX)

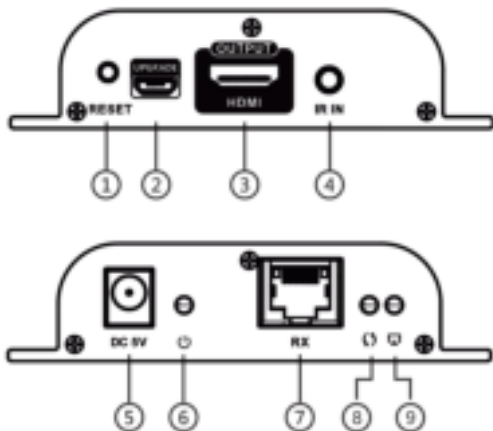




1	Reset	6	Power light <ul style="list-style-type: none"> <li>The indicator will turn on when the power is turned on</li> </ul>
2	Firmware upgrading	7	RJ45 signal output
3	HDMI signal input	8	Data transmission light <ul style="list-style-type: none"> <li><b>light off</b>: No data transmission</li> <li><b>Steady on</b>: the data is transmitting</li> </ul>
4	IR signal output to connect with blaster extension cable	9	Network link light <ul style="list-style-type: none"> <li><b>light off</b>: No Network connection</li> <li><b>Steady on</b>: Network connection is normal</li> </ul>
5	Power input (DC 5V/1A)		



## 5.2 Receiver (RX)



1	Reset	6	Power light • The indicator will turn on when the power is turned on
2	Firmware upgrading	7	RJ45 signal input
3	HDMI signal output	8	Data transmission light • <b>light off:</b> No data transmission • <b>Steady on:</b> the data is transmitting

4	IR signal input to connect with IR receiver extension cable	9	Network link light <ul style="list-style-type: none"> <li>▪ <b>light off:</b> No Network connection</li> <li>▪ <b>Steady on:</b> Network connection is normal</li> </ul>
5	Power input (DC 5V/1A)		

## 6. Installation Requirements

- HDMI source device (PC, NVR, Streaming Device, etc.)
- HDMI display, projector, etc.
- Network cables: UTP/STP CAT6 or higher network cables, which following the standard of IEEE-568B.

## 7. Installation Procedures

### 7.1 How to make a CAT6 network cable



Follow the standard of IEEE-568B:	
1-Orange/white	5-Blue/white
2- Orange	6-Green
3-Green/white	7-Brown/white
4-Blue	8-Brown

## 7.2 Connection Diagrams

Distance: 120 m max. for one-to-many connection, 200 m max. for one-to-one connection

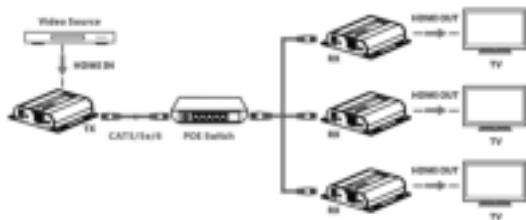
### 7.2.1 One-to-One Connection



**7.2.2 Cascading (by network switch):** By using the LAN switch/router to realize unlimited extension.



**7.2.3 One-to-Many Connection:** By using network switch, one sender to several receivers to realize extender & splitter function



**Note:**

Please use POE network router/switch.  
It is recommended to use Gigabit Ethernet switches (1000Mbps) in the LAN

### 7.3 IR User Guide

1. Plug in the IR blaster extension cable in the IR Out port of the sender (TX), plug in the IR receiver extension cable in the IR In port of the receiver (RX)
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 remote control at the receiving head of the IR receiver extension cable to operate

## 8. FAQ

**Q: Display shows: " Waiting for connection..."**

**A:**

- 1) Please check if the TX (sender) and network switch (if used) and RX (receiver) are connected, and make sure all cable connections are firmly.
- 2) Try "Reset" via button

**Q: Display shows "Please check the TX input signal"**

**A:**

- 1) Please check if there is a HDMI signal input on TX
- 2) Try to connect the signal source directly to the display device to see if there is signal output from source device or change the signal sources HDMI cable and try again.
- 3) Try "Reset" via button

**Q: Display: Picture not fluent, not stable**

**A:**

- 1) Please check the cable length between the TX to network switch (if used), the switch (if used) to the RX and the connection between each level is within the required range.
- 2) Click the "Reset" button on the TX/RX front panel, reset and re-connect

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