DIGITUS®

HDMI KVM IP Extender Set, 4K/60Hz

Installation Guide

DS-55355, DS-55356

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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 using
- Use only the power supply units, which are part of the package content.

1. Introduction

The HDMI KVM IP Extender Set enables the high-resolution transmission of HDMI AV signals in brilliant 4K UHD quality (4096x2160p at 60Hz) over up to 200 meters using CAT6 or higher-quality network cables. Thanks to the integrated KVM function, the mouse, keyboard and touchscreen devices can be used directly on the receiver side, enabling convenient control.

The system impresses with its flexible expandability and supports point-to-point connections as well as point-to-multipoint transmissions with up to 253 receivers. By using an existing 1G network infrastructure or additional network switch, signal transmission can be extended to unlimited distances (cascading). A low latency of only 120 to 170 ms ensures almost delay-free image reproduction in excellent quality. In addition, optional receivers (model: DS-55356) can be purchased separately to extend the range of applications individually.

Thanks to its simple connectivity and control, the HDMI KVM IP Extender Set is ideal for companies, conference rooms, digital signage and professional AV applications where reliable, low-latency and high-resolution signal transmission is required.

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-55356)
- Additional connectivity & control: KVM function for connecting mouse & keyboard as well as touch screen support on the receiver side
- Outstanding picture quality: Transmission in UHD of up to 4K/60Hz (4096x2160p) with low latency of 120-170 ms
- Supports CAT6 (or higher) network cables

3. Package Content (DS-55355)

- 1x Transmitter unit
- 1x Receiver unit
- 2x Mains adapter, EU plug (DC 5V/1A, 1.5 m)
- 1x USB cable (1.2 m)
- 1x Operating instructions

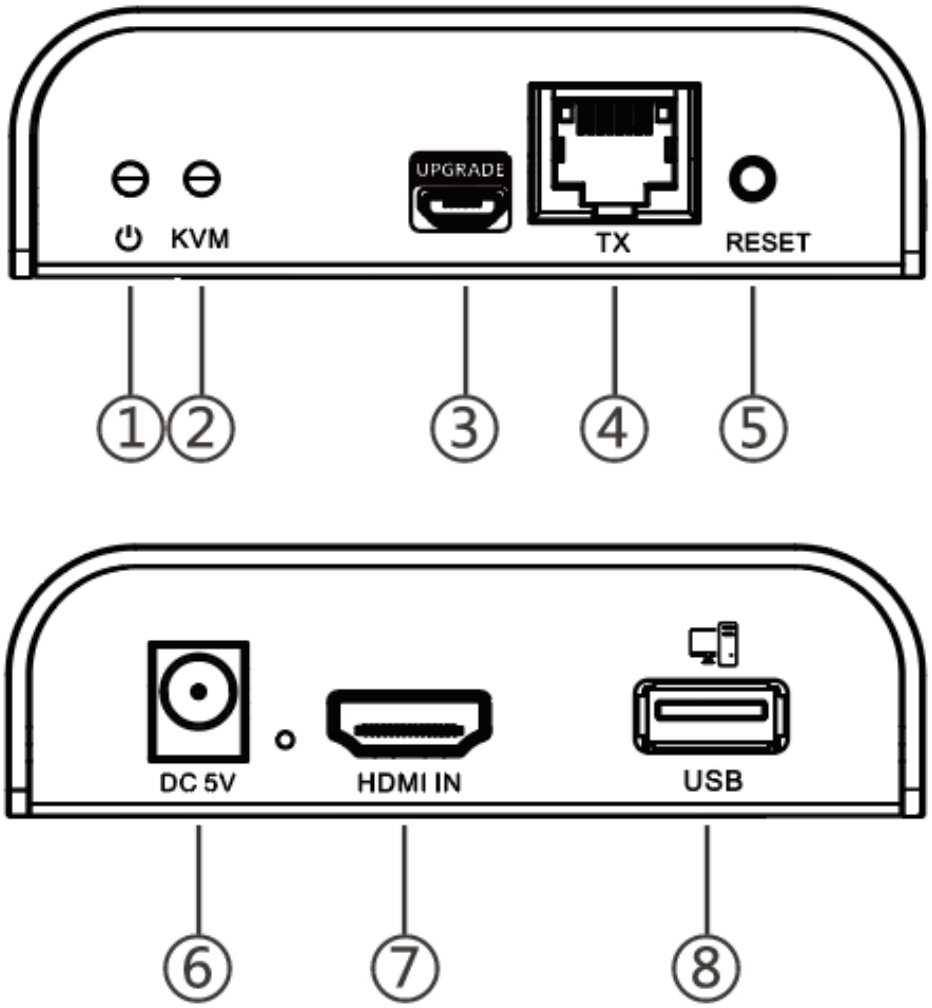
4. Specification

Item	Transmitter	Receiver
Video		
Input interface	1x HDMI	1x RJ45
Output interface	1x RJ45	1x HDMI
HDMI length	5 m max.	5 m max.
Maximum transfer rate	18 Gbps	
Compatibility	HDMI 2.0	
	HDCP 1.4/ HDCP 2.2	
Resolutions	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	
Transmission distance	**One to one:** 200 m over CAT6 or higher	
	One to many: 120 m over CAT6 or higher	
Transmission latency	1080P: 80 – 110 ms 4K@60Hz: 120 – 170 ms	
Audio Signal		

Input interface	1x HDMI	1x RJ45
Output interface	1x RJ45	1x HDMI
HDMI output	LPCM 2.0	
Power		
Power Supply	DC 5V/1A	DC 5V/1A
Power Consumption	TX ⩽ 3.5W	RX ⩽ 2.5W
Operating Environment		
Working temperature	-20℃ - 60℃	
Storage temperature	-30℃ - 70℃	
Humidity	0 - 90% RH (no condensation)	
Physical Properties		
Housing	Metal	
Weight	TX: 240 g	RX: 23 g
Color	Black	
Dimensions	109.6 (L) x 89.5 (w) x 26.3 (H) mm	
Protection	ESD protection 1a Contact discharge level 2 (±4KV) 1b Air discharge level 3 (±8KV) Implementation of the standard: IEC61000-4-2	
	Lightning protection, Surge protection	

5. Interfaces

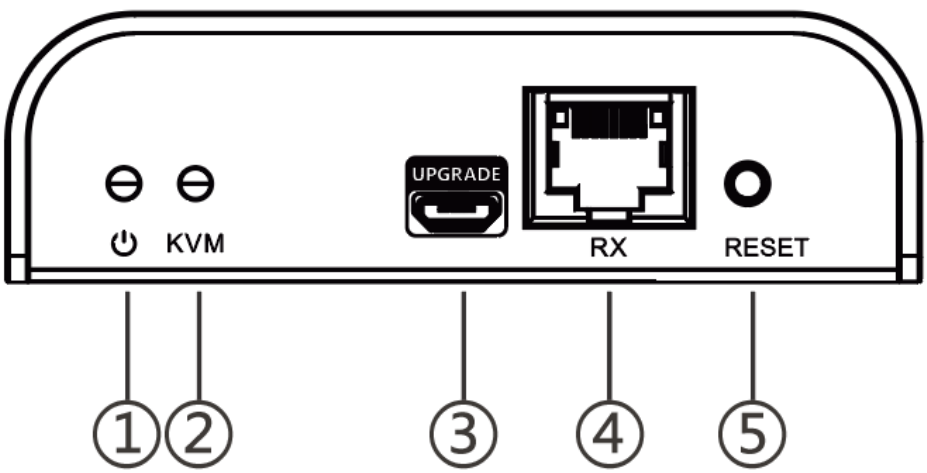
5.1 Transmitter (TX)

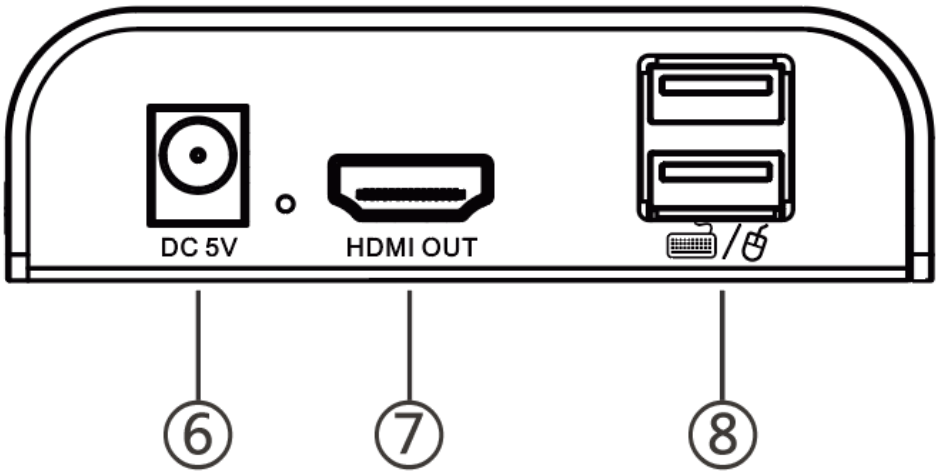


1	Power indicator	The indicator will turn on when power up
2	KVM indicator	▪ **Light flashing:** The KVM data is transmitting ▪ **Steady on:** The computer and the USB port are connected

3	Micro USB port	Used for firmware upgrading
4	RJ45 signal output	Connect with the network cable
5	Reset button	Restart the device
6	Power input	Connect with DC 5V/1A power adapter
7	HDMI input	Connect with the source device
8	USB port	Connect to the computer with USB cable

5.2 Receiver (RX)





1	Power indicator	The indicator will turn on when power up
2	KVM indicator	· **Light flashing:** The KVM data is transmitting · **Steady on:** The mouse and the keyboard are connected
3	Micro USB port	Used for firmware upgrading
4	RJ45 signal input	Connect with the network cable
5	Reset button	Restart the device
6	Power input	Connect with DC 5V/1A power adapter
7	HDMI output	Connect with HDMI display device
8	USB ports	Connect with keyboard and mouse

6. Installation Requirements

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

7. Installation Procedures

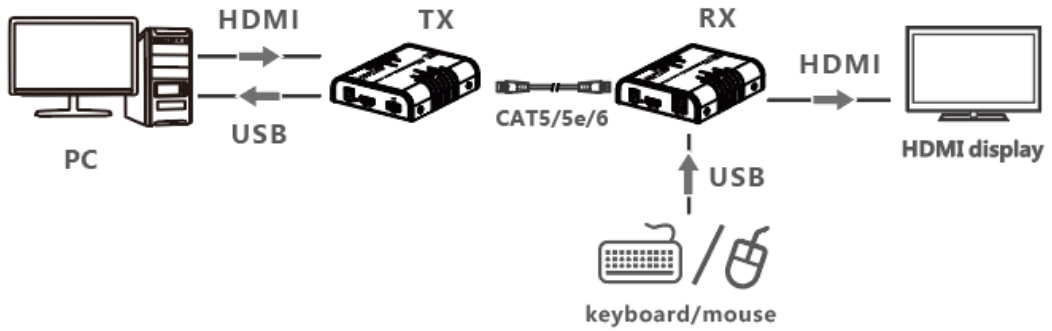
7.1 How to make a CAT6 network cable

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

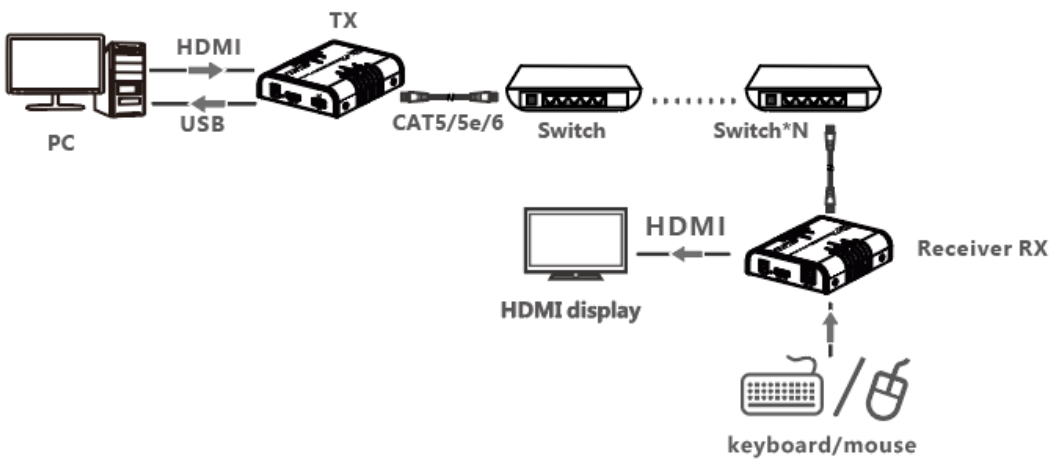
7.2 Connection Diagrams

120 m for one-to-many connection, 200 m for one-to-one connection

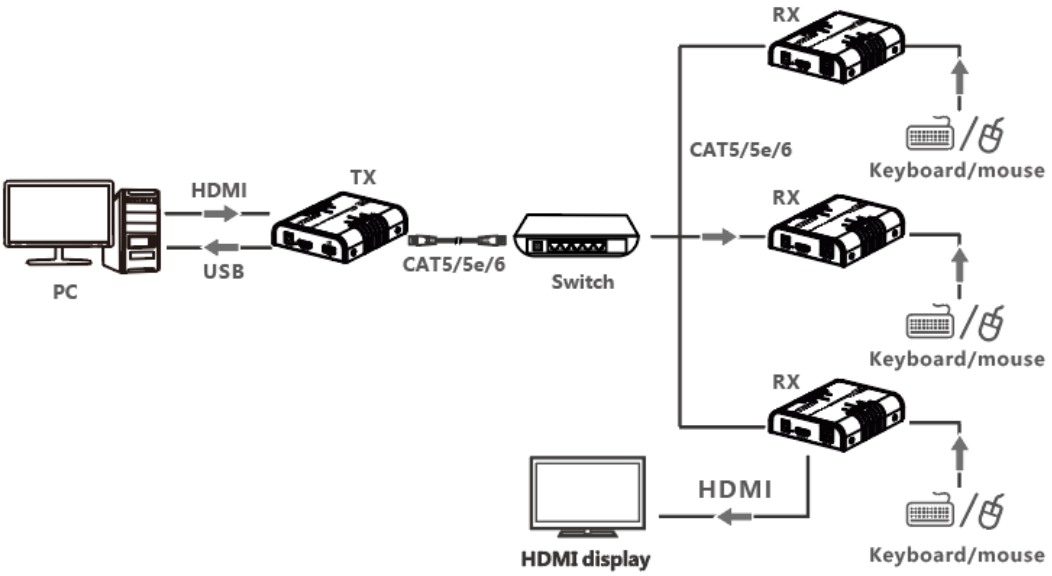
7.2.1 One-to-One Connection



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 network switch): By using network switch, one sender to several receivers to realize extender & splitter function.



Note:
It is recommended that Gigabit Ethernet Switches (1000Mbps) be used in network

7.3 Connection Instructions

1. Connect the source device to the HDMI In port of the sender (TX) with an HDMI cable and connect the HDMI Out port of the receiver (RX) to the display device with another HDMI cable.
2. If it's a one-to-one connection, use a network cable to connect the RJ45 port of the sender and receiver. If it is a one-to-many connection, use the gigabit switch as a bridge to connect the sender and the receivers with the network cable respectively.

3. If using the KVM function, connect the keyboard/mouse to the USB port of the receiver and connect the PC to the USB port of the sender via the USB cable
4. Plug the power supply into the devices to get started

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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