HDKVM-60X

HDMI USB KVM Extender

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Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local dealer or distributor for maintenance assistance. The functions described in this version were updated till July, 2018. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

All product function is valid till 2018-07-20.

Trademarks

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SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.

- Using supplies or parts not meeting the specifications of product may cause damage, deterioration or malfunction.

- Refer all servicing to qualified service personnel.

- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.

- Do not put any heavy items on the extension cable in case of extrusion.

- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.

- Install the device in a place with fine ventilation to avoid damage caused by overheat.

- Keep the module away from liquids.

- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.

- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

- Unplug the power cord when left unused for a long period of time.

- Information on disposal for scrapped devices: do not burn or mix with general household waste, and please treat them as normal electrical wastes.

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1. Introduction

1.1 Product Introduction to HDKVM-60X

Thanks for choosing the HDMI USB KVM Extender HDKVM-60X which is designed to transmit and extend uncompressed 1080p @60Hz HDMI and USB KVM signals up to 196ft (60m) from transmitter to receiver via a CAT5/ CAT5e/ CAT6 network cable.

The extender set HDKVM-60X includes a transmitter unit (HDKVM-60XT) and a receiver unit (HDKVM-60XR), working as a pair. Transmission distance is up to 60 meters (196ft) with nearly zero latency.

This KVM Extender can remote control the source device from the receiver side via keyboard and mouse. The HDMI USB KVM Extender HDKVM-60X is perfect for AV transmission in applications of HD conference system, HD video shooting, HD multimedia education system, HD digital advertising and signage etc.

For optimum performance and safety, please read the instructions carefully and keep the manual for future reference.

1.2 Features

- Support point to point connection.
- Uncompressed and nearly zero latency
- Support resolution up to 1080p@60Hz.
- HDCP compliant
- Transmitter supports one HDMI loop-out.
- Support KVM function, remote control conveniently
- Transmission distance with nearly zero latency up to 60m via CAT6 cable, 50m via CAT5E cable, 50m via CAT5 cable.
- Can be powered by network cable and only transmitter needs power supply.

1.3 Package List

- 1x HDKVM-60XT: HDMI USB KVM Transmitter (local unit)
- 1x HDKVM-60XR: HDMI USB KVM Receiver (remote unit)
- 1x Power Adapter (5V DC 2A)
- 1x USB Cable (Type A to Type A)
- 1x User Manual

Note: Please confirm if the product and the accessories are all included, if not, please contact with your dealer. Please contact your dealer immediately if any damage or defect in the components is found.

2. Panel Description

2.1 HDMI USB KVM Transmitter: HDKVM-60XT
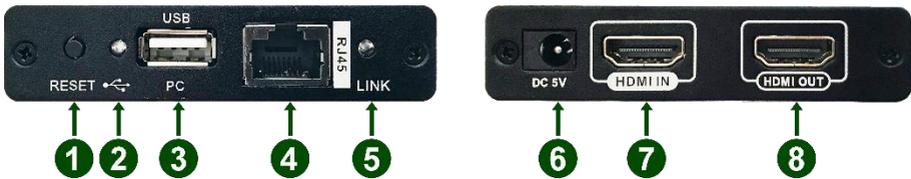
Figure 2-1 Front and Rear Panel of HDKVM-60XT (local unit)

No.	Name	Description
①	RESET button	Restart the unit
②	USB connection indicator LED	LED indicator keeps on and Fast flashing means the computer/ PC have established or connected, slow flashing means no established connection
③	USB PC	Connect with computer/ PC
④	RJ45 signal output	Connect with network cable
⑤	Video LINK indicator LED	LED indicator keep on when HDMI signal input, flashing when there is no signal transmission
⑥	DC 5V	Connect with DC 5V/ 2A power adapter
⑦	HDMI IN	Connect with HDMI source device
⑧	HDMI OUT	Connect with local HDMI display device.

📖　**Note**: Pictures shown in this manual are only for reference.

2.2 HDMI USB KVM Receiver: HDKVM-60XR

Figure 2-2 Front and Rear Panel of HDKVM-60XR (remote unit)

No.	Name	Description
①	RESET button	Restart the unit
②	USB connection indicator LED	LED indicator keeps on and Fast flashing means the computer/ PC have established or connected, slow flashing means no established connection
③	USB Port	Connect with keyboard and mouse
④	USB connection indicator LED	LED indicator keep on when HDMI signal input flashing when there is no signal transmission
⑤	Video LINK indicator LED	USB port, used for firmware update.
⑥	OPTIONAL DC 5V	Connect with DC5/ V2A power adapter (**optional**)
⑦	HDMI OUT	Connect to HDMI display device
⑧	USB Port	Connect with keyboard and mouse

📖 **Note**: Pictures shown in this manual are only for reference.

3. System Connection

3.1 Usage Precautions

1) Make sure all components and accessories included before installation.

2) System should be installed in a clean environment with proper temperature and humidity.

3) All of the power switches, plugs, sockets, and power cords should be insulated and safe.

4) All devices should be connected before power on.

5) Use shielded straight-thru CAT5/ CAT5e/ CAT6 cable with IEEE T568B terminations for good transmission effect.

3.2 System Diagram HDKVM-60X
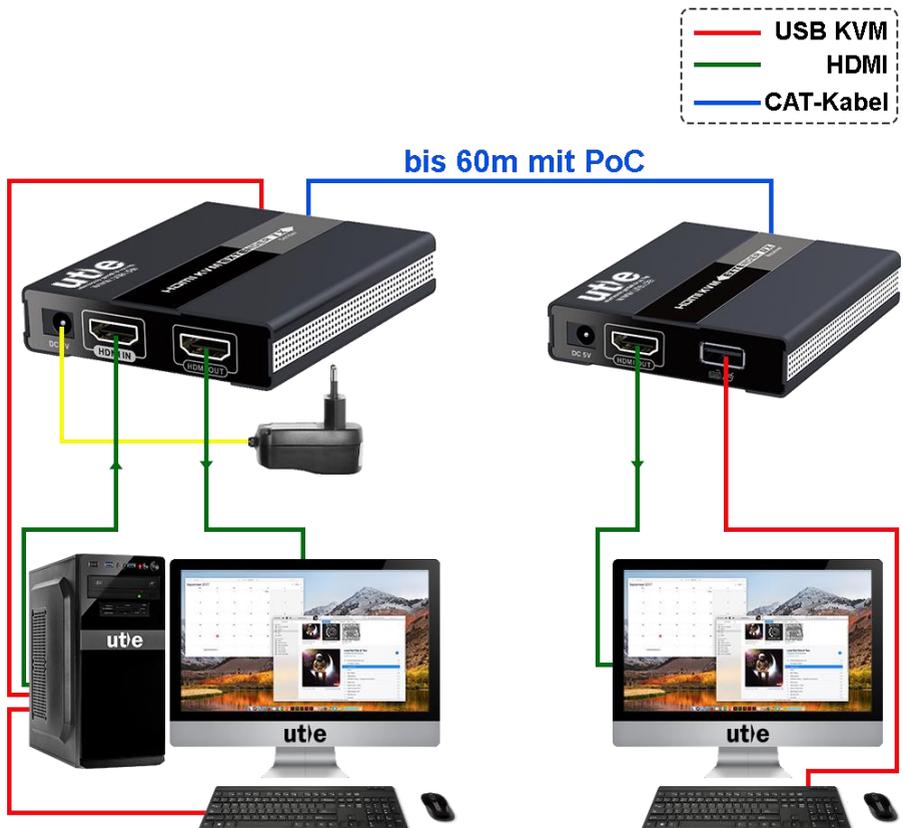
3.3 Connection Procedure

Step1. Connect local unit (Sender) and remote unit (Receiver) with a network cable [1,2,3]

Step2. Connect HDMI source device (e.g. computer graphics card, PS3/ PS4, DVD-Player, Set-Top box, HD monitoring equipment …) to **HDMI IN** port of local unit (Sender) with HDMI cable.

Step3. Connect HDMI display device (e.g. SDTV, HDTV, Projector, … with HDMI port) to **HDMI OUT** port of remote unit (Receiver) with HDMI cable.

Step4. Connect the keyboard/ mouse USB ports of remote unit (Receiver).

Step5. Connect the PC to **USB PC** port of local unit (Sender) with included USB cable.

Step6. If use HDMI loop-output function, connect the HDMI display devices to **HDMI OUT** port of local unit (Sender) with HDMI cable.

Step7. Plug the power supply into **DC 5V** port of **local unit** (Sender) [power led lights illuminates] and it works

📖 **Notes**:

1. The network cable/ CAT cable must comply with the IEEE 568B standard.

2. We recommend the use of CAT6 cables.

3. Please note maximum cable lengths:
   - CAT6 cable up to 60m
   - CAT5/5e cable up to 50m

3.4 System Application

The HDMI USB KVM Extender HDKVM-60X has a good application in various occasions, such as AV transmission in applications of HD conference system, HD video shooting, HD multimedia education system, HD digital advertising and signage etc.

3.5 Twisted Pair Cable Connection

The twisted pair/ network cable used in this extender MUST be a straight-through cable comply with the IEEE 568B standard.

TIA/EIA T568B	
Pin	Cable color
1	orange white
2	orange
3	green white
4	blue
5	blue white
6	green
7	brown white
8	brown
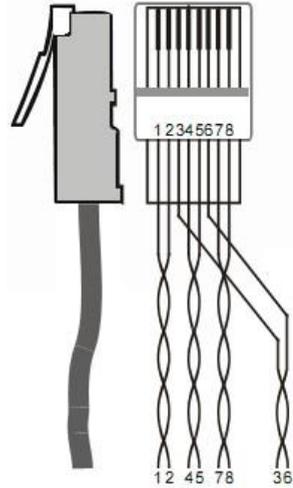
4. Specification

Model Spec	HDKVM-60XT (Transmitter)	HDKVM-60XR (Receiver)
Connectors		
Video Input	(1) HDMI	(2) USB KVM
Video Output	(1) HDMI [HDMI Loop-Out]	1 HDMI
USB port	(1) Type A USB female, [USB cable is included]	(2) Type A USB female [for USB KVM]
Power	(1) DC power input	(1) DC power input [for optional use]
Sender-to-Receiver	(1) RJ45 female	(1) RJ45 female
Audio/ Video General		
HDMI compliance	HDMI1.3	HDMI1.3
HDCP compliance	HDCP1.4	HDCP1.4
HDMI resolution range	640x480@60Hz ~ 1920x1080@60Hz	
Bandwidth/ Transfer rate	10.2Gbps	
Input and output TMDS signal	0.5 ~ 1.5Vp-p (TMDS)	
Input and output DDC signal	5Vp-p (TTL)	
Audio	Audio, transmit through HDMI audio	
Transmission Distance		
CAT6 cable	up to 60m	
CAT5/ CAT5e	up to 50m	
Power Supply		
Power Supply	external power adapter (DC5V/ 2A) [included]	via PoC (optional via power adapter)
Power consumption	2W	< 2W
Protection Level		
Electrostatic protection of the whole machine	1a contact discharge level 3, 1b air discharge level 3, implementation of the standard: IEC61000-4-2	
Operating Environment		
Working temperature	0 ~ 60℃	
Storage temperature	-10 ~ +70℃	
Humidity	0% ~ 90% (no condensation)	

Body Properties		
Dimension (L*W*H)	95.0 x 78.0 x 18.6 mm	95.0 x 78.0 x 18.6 mm
Material	Aluminium alloy material + crystal panel	
Treatment process	Grit blast	
Color	Black	
Net Weight	200g	200g

4.1 Supported Resolutions of HDMI USB KVM Extender HDKVM-60X

Aspect Ratio	Resolution	Refresh Rate
16:9	1920x1080	60Hz
	1280x720	60Hz
16:10	1680x1050	60Hz
	1440x900	60Hz
	1280x800	60Hz
5:4	720x576	60Hz
	1280x1024	60Hz
4:3	1024x768	60Hz
	800x600	60Hz
	640x480	60Hz
3:2	720x480	60Hz

5. Troubleshooting & Maintenance

● **No image output:**

- Check and make sure all cables are connected well.
- Restart the local unit (Sender)/ remote unit (Receiver) by "RESET" button.

● **Remote unit (Receiver) "Video LINK indicator" led is flashing all the time**:

- Make sure network cable connection follows the standard of IEEE568B.
- Check whether local unit (Sender) has HDMI signal input.
- Reset transmitter and receiver and reconnect.

● **Receiver "Video LINK indicator" led lights keep on then but no image output:**

- Make sure the monitor supports the current HDMI signal mode.
- Make sure HDMI cable is well connected with TV/ HDMI display device.
- Make sure the network cable is fine copper wires.

Note: If your problem still remaining after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.

6. Customer/ After-sales Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

If there appear some problems when running the HDKVM-60X please check and deal with the problems reference to this user manual. Any transport costs are borne by the users during the warranty.

1) **Product Limited Warranty:** We warrants that its products will be free from defects in materials and workmanship for two years**,** which starts from the first day the product leaves warehouse (check the SN mark on the product).
Proof of purchase in the form of a bill of sale or receipted invoice must be presented to obtain warranty service.

2) **What the warranty does not cover:**
   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - Normal wear and tear
     - Use of supplies or parts not meeting our specifications
     - No certificate or invoice as the proof of warranty.
     - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - Damage caused by force majeure.
     - Servicing not authorized by distributor.
     - Other causes which does not relate to a product defect
   - Delivery, installation or labor charges for installation or setup of the product

3) **Technical Support:** Email to our after-sales department or make a call, please inform us the following information about your cases.
   - Product version and name.
   - Detailed failure situations.
   - The formation of the cases.

Remark: For further assistance or solutions, please contact your local dealer or our customer support (info@ute.de)

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