

HDMI OVER IP OPTICAL KVM EXTENDER

4K@60Hz Uncompressed HDMI KVM Extender Over Fiber Optic Cable



• Important safety notice:

1. Please distinguish the transmitter and receiver before installation.
2. Do not expose the device to rain, or be splashed or immersed in any liquid.
3. The power supply is DC 5V/2A. Make sure specification matched if using 3rd party adapters.
4. Do not unplug the SFP+ optical module when the device is working.

• Introduction

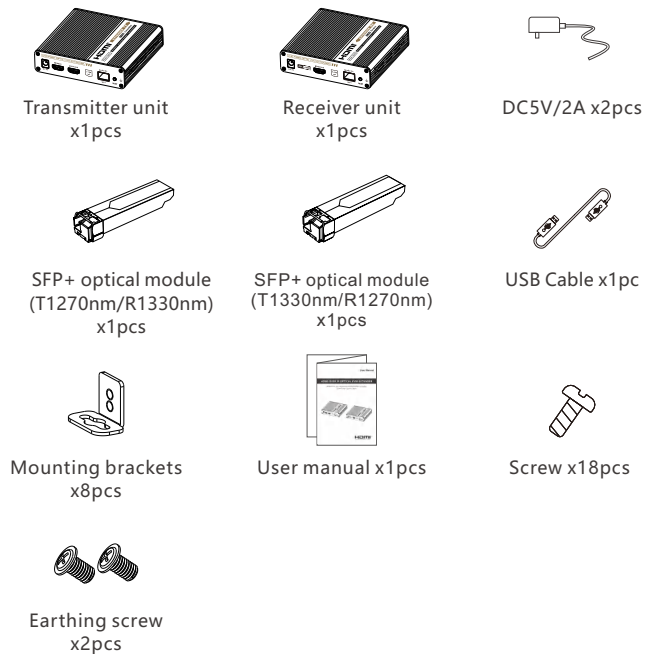
This is an HDMI optical fiber KVM extender kit, which adopts a new transmission technology that supports zero latency and uncompressed transmission. The HDMI 4K@60Hz signal can be extended by 40 kilometers through single-mode fiber. This product supports KVM, HDMI loop out, audio separation of S/PDIF. It also supports one-to-one connection, one-to-many connection through the switch, and switch cascading. It is widely used in security monitoring, control center, broadcasting, smart cities and other fields.

• Features

1. Support 4K@60Hz, HDR10.
2. Support zero latency, uncompressed transmission.
3. The maximum transmission distance is 40 km.
4. Support one-to-one and one-to-many connection through the 10Gb switch.
5. Support switch cascading.
6. Support KVM function.

7. The receiver can output the source audio additionally through the S/PDIF port.
8. The transmitter supports HDMI loop out.
9. 24/7 reliable.
10. Lightning Protection, Surge Protection, ESD Protection.

• Package Contents

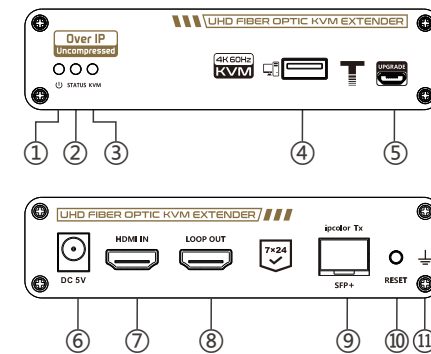


• Installation Requirements

1. HDMI source device (PC, DVD, play station, etc.)
2. HDMI display device (TV, monitor, projector, etc.)
3. Single-mode fiber with LC connector.
4. Mouse and keyboard.
5. 10 Gigabit switch with SFP+ ports (one-to-many connection & switch cascading).

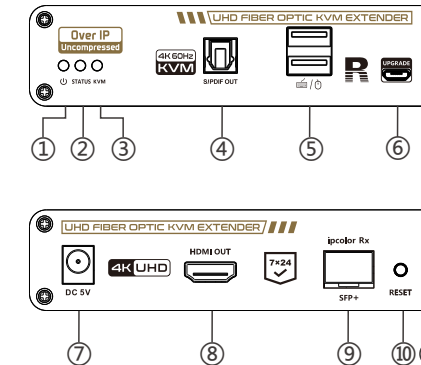
• Panel Description

1. HDMI KVM EXTENDER TX



① Power indicator	The indicator will turn blue when the power is turned on
② Status indicator	Light off: The transmitter and the receiver have not established a connection Slow flash (every 1 second): The transmitter and the receiver are connected but no video data transmission Quick flash (every 200ms): The video signal is connecting
③ KVM indicator	Light off: The computer is not connected to the device via the USB port Steady on: The computer is connected to the device via the USB port Quick flash (every 200ms): KVM data is being transmitted
④ USB-A port	Connect with computer
⑤ Upgrade port	Used for firmware upgrade
⑥ Power input	Connect with DC 5V/2A power adapter
⑦ HDMI input	Connect with HDMI source device with HDMI cable
⑧ HDMI output	Connect with local HDMI display device with HDMI cable
⑨ SFP+ signal output	Insert the SFP+ optical module (T1270nm/R1330nm)
⑩ Reset button	Press to restart the device, press for 5 seconds to restore device factory settings
⑪ Earthing port	Earthing screw and earthing lead can be installed here

2. HDMI KVM EXTENDER RX



① Power indicator	The indicator will turn blue when the power is turned on
② Status indicator	Light off: The transmitter and the receiver have not established a connection Slow flash (every 1 second): The transmitter and the receiver are connected but no video data transmission Quick flash (every 200ms): The video signal is connecting
③ KVM indicator	Light off: :The mouse/keyboard is not connected to the device via the USB port Steady on:The mouse/keyboard is connected to the device via the USB port Quick flash (every 200ms): KVM data is being transmitted

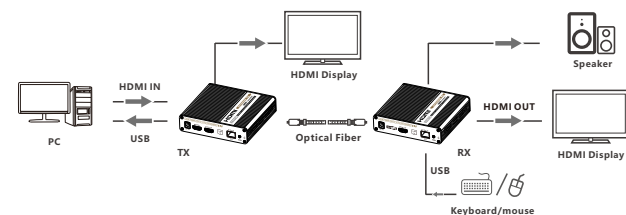
④ S/PDIF output	Output the digital audio
⑤ USB-A port	Connect with keyboard and mouse
⑥ Upgrade port	Used for firmware upgrade
⑦ Power input	Connect with DC 5V/2A power adapter
⑧ HDMI output	Connect with local HDMI display device with HDMI cable
⑨ SFP+ signal output	Insert the SFP+ optical module (T1330nm/R1270nm)
⑩ Reset button	Press to restart the device, press for 5 seconds to restore device factory settings
⑪ Earthing port	Earthing screw and earthing lead can be installed here

• Installation Procedures

1. Insert the SFP+ optical modules into the transmitter and receiver respectively.

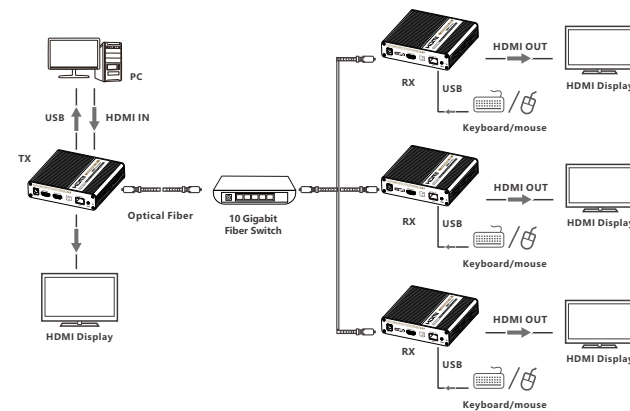
2. Connection Diagrams

2.1 One-to-one connection:

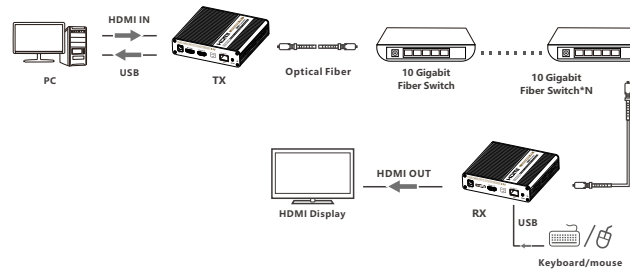


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2.2 One-to-many connection:



2.3 Switch cascading



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3. Connection Instructions

- 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) If it's one to one connection, then use a fiber optic cable to connect the SFP+ port of the transmitter and receiver. If it is one to many connection, then use the 10 Gigabit switch as a bridge to connect the transmitter and the receivers with the fiber optic cables respectively.
- 3) If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
- 4) If using the KVM function, connect the mouse/keyboard to the USB port of the receiver and connect the computer to the USB port of the transmitter via a USB cable.
- 5) Plug the power supply into the devices to get started.

• FAQ

Q: Why the power indicator is on but the status indicator is off?

- A: 1) Please check whether the fiber-optic cable is connected well.
2) Change a fiber-optic cable to connect.

Q: Why is the status indicator has been flashing slowly?

- A: 1) Please check whether there is HDMI signal input for the TX.
2) Try to connect the signal source directly to the display device, or try to change the signal source and HDMI cable and test again.

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Q: Why it keeps showing "Search ipcolor Tx..." on the screen?

A: The transmitter and the receiver are not connected or they are connected but there is no data transmission. Please refer to the above two questions for the solution.

Q: Why is the output image unstable?

- A: 1) Check whether the length of the fiber-optic cable connected from TX to RX is within 40 kilometers.
2) The length of HDMI cable is recommended to be ≤5 meters.
3) Press the "reset" button on TX and RX panels to restart and reconnect.

• Technical Parameters

Item	Specification
Transmission protocol	ipcolor
Latency	Zero latency
Transmission type	Uncompressed transmission
HDMI signal	HDMI 2.0, HDCP 2.2
HDR	HDR10
Optical module type	SFP+
Fiber-optic cable type	Single mode fiber (Use with the default optical modules)
Optical fiber connector type	LC
SFP+ optical fiber module wavelength	1270nm/1330nm
Connection type	One-to-one connection One-to-many connection Switch cascading
Transmission distance	≤40km

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HDMI Resolution	720P@50/60Hz, 1080P@24/25/50/60Hz, 1080i@50/60Hz, 1024*768@60Hz, 1280*768@60Hz, 1280*800@60Hz, 1280*960@60Hz, 1280*1024@60Hz, 1440*900@60Hz, 1400*1050@60Hz, 1600*900@60Hz, 1600*1200@60Hz, 1680*1050@60Hz, 1920*1080@60Hz, 1920*1200@60Hz, 2560*1440@60Hz, 2560*1600@60Hz, 3840*2160@24/25/30/50/60/23.9/29.9/59.9Hz, 4096*2160@24/25/30/50/60/23.9/29.9/59.9Hz
Audio formats	LPCM 7.1/DTS-HD/DTS-Audio/Dolby Digital plus /Dolby TrueHD/Dolby Digital/Dolby Atmos
Working temperature	-20~60°C
Storage temperature	-30~70°C
Humidity (no condensation)	0~90% RH
Protection	ESD protection 1a Contact discharge level 3 1b Air discharge level 3 Implementation of the standard: IEC61000-4-2 Lightning protection Surge protection
Power supply	DC 5V/2A
Power consumption	<5W
Material	Aluminum alloy material + crystal panel
Color	Black
Weight	TX: 420g RX: 420g
Dimension	123.95(L)*115.20(W)*30.00(H)mm

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Disclaimer

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