4K60 HDMI KVM Extender Over CATx 70m

[HDMI 2.0b, Local Out, USB 1.1, PoC, 70m]

DSG-KEX-70SK

User Manual

VER 1.1

Thank You For Purchasing This Product

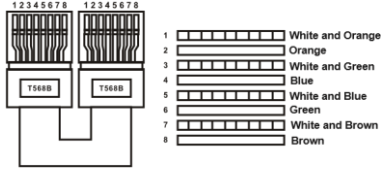
For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge Protection Device Recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment.

Caution

The product requires the use of UTP connectors. Please connect using the direct interconnection method and do not cross connect.



Direct Interconnection Method

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1. Introduction

This 18Gbps HDMI KVM Extender extends HDMI 4K signals up to 70m (230 feet) using a single Cat6/6a cable, enabling zero-delay, uncompressed long-distance transmission between the Transmitter and Receiver. It supports video resolutions up to 4K@60Hz and features KVM signal pass-through for remote control of the source device at display. Additionally, it offers EDID copy pass-through functionality between the source and display devices, along with support for Power Over Cable (PoC). This versatile Extender is ideal for use in multimedia conference halls, TV teaching, and large screen displays.

2. Features

- HDMI 2.0b and HDCP 2.2 compliant
- Supports 18Gbps video bandwidth
- Supports video resolutions up to 4K@60Hz RGB/YCBCR 4:4:4
- Transmission distance can be extended up to 230ft / 70m via a single CAT6/6a cable
- Supports HDR, HDR10, HDR10+, Dolby Vision, HLG
- Audio formats: LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+)
- Supports 3.5mm analog audio de-embedding; audio is output through the L/R OUT port of the Receiver
- EDID copy pass-through function between the source device and display device
- Supports bi-directional PoC (Power over Cable) function
- Includes USB KVM pass-through function, USB1.1 compliant, supporting remote-control by keyboard and mouse
- Compact design for easy and flexible installation

3. Package Contents

① 1 × 18Gbps HDMI Extender (Transmitter)
② 1 × 18Gbps HDMI Extender (Receiver)
③ 1 × USB-A to USB-B Cable (1.5 meters)
④ 4 × Mounting Ears
⑤ 8 × Machine Screws (KM3*4)
⑥ 1 × 12V/1A Locking Power Adapter
⑦ 1 × User Manual

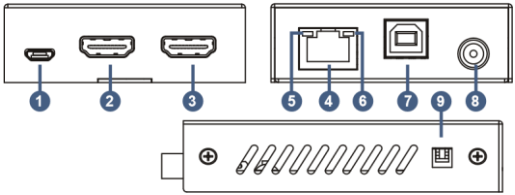
4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K@60Hz RGB/YCbCr 4:4:4
Transmission Distance	4K@60Hz 4:4:4 - 70m, 1080P - 70m (Cat6/6a cable)
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12 bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+)

Connections	
Transmitter	Input: 1 × HDMI IN [Type A, 19-pin female] Output: 1 × HDMI OUT [Type A, 19-pin female] Control: 1 × SERVICE [Micro-USB jack] 1 × USB Port [USB Type B] Network: 1 × CAT OUT [RJ-45, 8-pin female]
Receiver	Output: 1 × HDMI OUT [Type A, 19-pin female] 1 × L/R OUT [3.5mm Stereo Mini-jack] Control: 1 × SERVICE [Micro-USB jack] 2 × USB Port [USB Type A] Network: 1 × CAT IN [RJ-45, 8-pin female]
Mechanical and Environmental	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 90mm (W) × 68mm (D) × 22mm (H)
Weight	Transmitter: 170g, Receiver: 169g
Power Supply	DC 12V/1A; Supports bi-directional PoC functionality
Power Consumption	4.2W (max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20 ~ 90% RH (non-condensing)

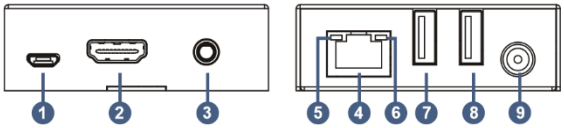
5. Operation Controls and Functions

5.1 Transmitter Panel



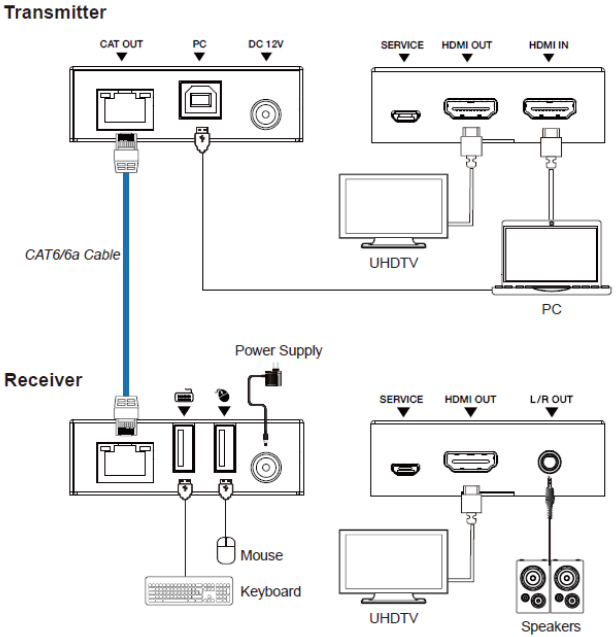
No	Name	Function Description
1	SERVICE	Firmware update port.
2	HDMI OUT	HDMI signal loop-out port for connection to local monitor.
3	HDMI IN	HDMI signal input port to connect to HDMI source device.
4	CAT OUT	RJ-45 connector to connect to the CAT IN port of the Receiver with CAT6/6a cable.
5	Link Signal Indicator (Green)	• **Light On:** Transmitter and Receiver are in good connection status. • **Light Flashing:** Transmitter and Receiver are in poor connection status. • **Light Off:** Transmitter and Receiver are not connected.
6	Data Signal Indicator (Yellow)	• **Light On:** There is HDMI signal transmission with HDCP encryption. • **Light Flashing:** There is HDMI signal transmission without HDCP encryption. • **Light Off:** There is no HDMI signal transmission.
7	USB-B	Connects to USB port of the PC to allow remote access and control through KVM functionality at the Receiver.
8	DC 12V	DC 12V/1A power input port. *Note that the Extender supports PoC function. Either the Transmitter or the Receiver needs to be connected to a 12V/1A power supply, while the other does not require external power.*
9	EDID DIP switch	Use the DIP switch to set EDID. (Switching to the upper end indicates 1; switching to the lower end indicates 0.) **11** - EDID information is copied from the display at the RX. **10** - EDID is preset to 4K@60Hz 2.0CH **01** - EDID is preset to 1080P 2.0CH **00** - EDID information is copied from the HDMI OUT at the TX.

5.2 Receiver Panel



No	Name	Function Description
1	SERVICE	Firmware update port.
2	HDMI OUT	HDMI signal output port to connect to HDMI display device.
3	L/R OUT	Analog audio output port. Use for audio de-embedding output.
4	CAT IN	RJ-45 connector to connect to the CAT OUT port of the Transmitter with CAT6/6a cable.
5	Link Signal Indicator (Green)	• **Light On:** Transmitter and Receiver are in good connection status. • **Light Flashing:** Transmitter and Receiver are in poor connection status. • **Light Off:** Transmitter and Receiver are not connected.
6	Data Signal Indicator (Yellow)	• **Light On:** There is HDMI signal transmission with HDCP encryption. • **Light Flashing:** There is HDMI signal transmission without HDCP encryption. • **Light Off:** There is no HDMI signal transmission.
7	Keyboard Port	Connects to the Keyboard.
8	Mouse Port	Connects to the Mouse.
9	DC 12V	DC 12V/1A power input port. *Note that the Extender supports PoC function. Either the Transmitter or the Receiver needs to be connected to a 12V/1A power supply, while the other does not require external power.*

6. Application Example



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