

SIMPLIFIED
MFG

EXMICROKVM



User Manual

VER 1.0

Thank you for purchasing this product

The Simplified MFG EXMICROKVM is designed to provide years of reliable service. At Simplified MFG, we want the experience with this device to be the best possible and are committed to helping achieve that experience.

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. A HDSURGE is highly recommended on cable and satellite boxes.

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1. Introduction

The EXMICROKVM can extend an HDMI2.0b (18Gbps) high-definition audio and video signal and two-way IR up to 50 meters (164 feet) and 1080P signals up to 70m (230ft.) between transmitter and receiver over a single Cat5e/6/7 cable. The EXMICROKVM supports resolutions up to 4K2K@60Hz 4:4:4, up to 18Gbps, and HDCP 2.2/1.4. In addition, the EXMICROKVM extender supports USB 1.1 (suitable for keyboard/mouse), 3.5mm audio breakout at TX and the ability to override EDID requests of the display. The EXMICROKVM extender is one of, if not the most efficient HDMI extenders available today. The current draw is typically less than one third the normal current draw making this device more efficient and smaller.

2. Features

- HDMI 2.0b, HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
- Supports input and output video resolution up to 4k2k@60Hz 4:4:4 up to 18Gbps
- Supports HDR/HDR+
- Distance up to 164ft/50m @ 4k or 1080p
- USB 1.1 Pass-thru (Type-B host at TX and two Type-A at RX)
- Compact size
- 2-Ch. LPCM 3.5mm audio breakout
- EDID override (copy display/ 1080p 2 ch./ 4K 2ch./ copy loop out
- Single power supply – can be powered from either the RX or TX

3. Package Contents

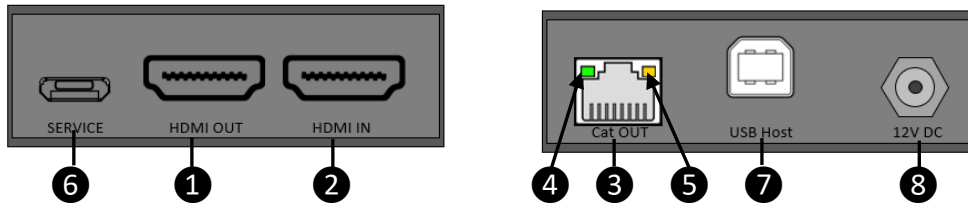
- 1× HDMI 18Gbps transmitter
- 1× HDMI 18Gbps receiver
- 1× USB Type-B to USB Type A cable (1m)
- 1× 12V/1A Locking Power supply
- 4× Mounting Ears with 8 fitment screws
- 1× User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 / HDCP 1.4
Video Bandwidth	18Gbps
HDR Formats	HDR/HDR10+
Video Resolution	Up to 4K60Hz 4:4:4
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2/4:2:0, YUV 4:4:4
Color Depth	8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0) 8-bit (4K60Hz 4:4:4)
HDMI Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus (DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connections	
Transmitter	Inputs: 1x HDMI Type A [19-pin female] Outputs: 1x HDMI Type A [19-pin female] 1x CAT out [RJ45, 8-pin female] Control: 1x USB Micro (SERVICE) 1x USB Type-B port
Receiver	Inputs: 1x CAT in [RJ45, 8-pin female] Outputs: 1x HDMI Type-A [19-pin female] 1x IR out [3.5mm Stereo mini jack] Control: 1x USB Micro (SERVICE) 2x USB Type-A
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 90mm/3.5" [W] x 68mm/2.625" [D] x 22mm/.87" [H]
Weight	Transmitter: 170g (6oz.), Receiver: 169g (6oz.)
Power Supply	Input: AC 100 - 240V 50/60Hz Output: DC 12V/1A
Power Consumption	4.2 W
Op. Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

5. Operation Controls and Functions

5.1 Transmitter Panel

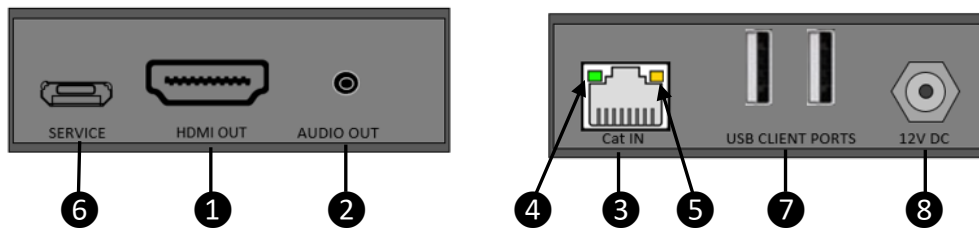


Number	Name	Function description
1	HDMI Out	HDMI loop output port, connect to HDMI display device such as TV or Projector with an HDMI cable.
2	HDMI In	HDMI input port, connect to HDMI source device such as Media server or other 4K source
3	CAT Out	Connect to CAT IN port on the receiving end with a CAT6 cable.
4	Power LED (Green)	The LED will illuminate when the transmitter and receiver are connected, and power is applied to one of them.
5	Data signal LED (Orange)	The LED will illuminate when the transmitter and the receiver have signal transmission (link)
6	SERVICE port	For firmware updated use.
7	USB Host	Connects to Computer, NVR or other USB Host with supplied Type-B to Type-A cable
8	DC 12V	Plug DC 12V/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The EXMICROKVM can be powered from either the RX or the TX by 12V/1A power adapter, only one supply is needed)



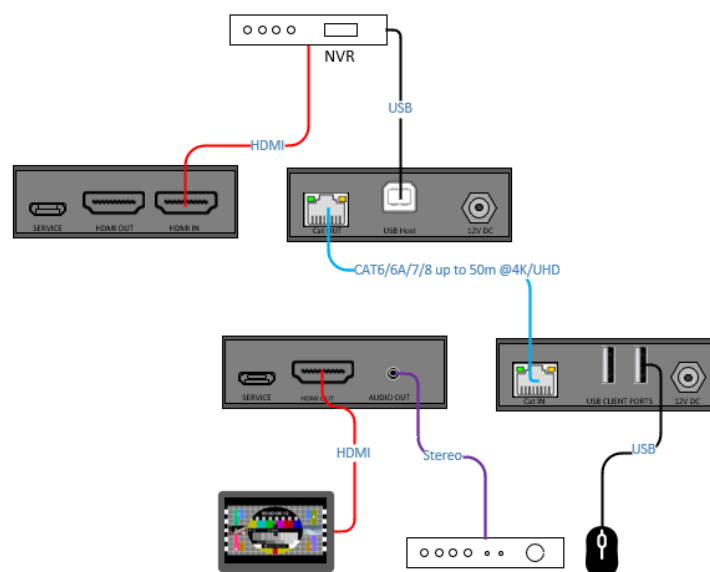
	EDID information is copied from the display at the RX
	EDID is preset to 4K @ 60Hz. Stereo
	EDID is preset to 1080p Stereo
	EDID is copied from the HDMI out at the TX

5.2 Receiver Panel



Number	Name	Function description
1	HDMI Out	HDMI output port, connect to HDMI display device such as TV or Projector with an HDMI cable.
2	Audio out	
3	CAT In	Connect to CAT Out port on the transmitter end with a CAT6 cable.
4	Power LED (Green)	The LED will illuminate when the transmitter and receiver are connected, and power is applied to one of them.
5	Data signal LED (Orange)	The LED will illuminate when the transmitter and the receiver have signal transmission (link).
6	SERVICE port	For firmware update use.
7	USB Client ports	Connect to keyboard and/or mouse
8	DC 12V	Plug DC 12V/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The EXMICROKVM can be powered from either the RX or the TX by 12V/1A power adapter, only one supply is needed)

6. Application Example



7. Troubleshooting

The EXMICROKVM is 100% tested and uses a very stable and reliable chipset. It is unlikely to not work out of the box. HDMI is a constantly changing format and can change with little to no warning. The EXMICROKVM has a lot of safeguards built in to alleviate these pressures. The first is the EDID switches, the second is the LED indicators, and the third is that we can change firmware if needed easily in the field.

Issue	Solution
No Power indicator (Green LED at Cat connection)	Both RX and TX need to be connected before the LED indicator illuminates. If both are connected, check the category cable and/or power connection
No image on display	The amber LED indicated the status of the HDMI circuit. The amber LED should be illuminated on both the RX and the TX either solid or flashing about 1 time per second. Not illuminated means the circuit is not complete, flashing rapidly is a HDMI cable failure.
No Sound at Display/AVR/Soundbar	If there is a picture and no sound, the unit is operating correctly, there is some other sort of conflict. You can use the EDID switch to see if this is the case. Engage one of the preset EDID's and the sound should return.
Intermittent picture	If the picture is flashing on or off, it is nearly always a cable issue. Look at HDMI cables and the category cable/connection. Running a known working category cable across the floor is a good way to troubleshoot the cat cable
USB Is not operational	If you have picture and sound solved, you should also have USB as they are all encoded together. It is most likely a discovery issue. Try connection the peripherals again this time with the EXMICRO2KVM powered.

8. Warranty

Should you feel that this product does not function adequately due to defects in materials or workmanship, we (referred to as “the warrantor”) will, for the length of the period indicated below (starting from the original date of the purchase) either a) repair the product with new or refurbished parts. Or b) Replace the product with a new or refurbished product. All Simplified MFG products are covered by a 3-year warranty. During this period there will be no charge for unit repair, replacement of unit components or replacement of the product if deemed necessary. The decision to repair or replace is made by the warrantor. The purchaser must mail in the product during the warranty period. This limited warranty only covers the product purchased as new and is extended to the original purchaser only. It is non-transferable to subsequent owners, even during the warranty period. A purchase receipt or other proof of purchase date is required for the limited warranty service.

9. Contact Information

Sales and Tech Support

P. 833-HDMI-411 (833-436-4411)

E. info@simplifiedmfg.com



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