

4K HDMI® EXTENDER WITH KVM



**Vanco Part Number
EVEXKVM3**

**4K HDMI® Extender
with KVM**

EVOLUTION
BY  **VANCO**
ADVANCING DIGITAL CONNECTIVITY

www.vanco1.com • 800.626.6445

DEAR CUSTOMER

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.

This product is 100% inspected and tested in the United States to verify
HDMI performance parameters.

WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
3. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
4. Do not install near any source of heat, including other units that may produce heat.
5. Do not place unit near flames.
6. Only clean unit with a dry cloth.
7. Unplug unit during lightening storms or when not used for an extended period of time. A surge protector is strongly recommended.
8. Protect the power cord from being walked on or pinched, particularly at the plugs.
9. Use unit only with accessories specified by the manufacturer.
10. Refer all servicing to qualified personnel.

CAUTION

HDMI is a very complex technology requiring continuous authentication of the signal and the same video resolution and audio settings on all electronic equipment in the system. When there are multiple sources and displays, the video resolution and audio setting on all connected units must be adjusted to correspond with that of the display having the lowest video and audio capability.

INTRODUCTION

The Evolution by Vanco EVEXKVM3 HDMI Extender over single Cat6 with Digital Audio Breakout, HDMI Loop-out, KVM, and PoE, extends 4K@60Hz, 4:4:4 Chroma, and HDR10 up to 230ft/70m. USB pass-through allows for controlling a security NVR/DVR, computer, NAS system, touch screen display, or other components that are controlled by USB with this extender. No need to run a separate line or extender just for USB control! Vanco's patented bi-directional Power over Ethernet (PoE) Technology transmits power over Cat6, allowing either the Transmitter or Receiver to be powered without the use of a power supply for an easy installation. The transmitter is equipped with an HDMI loop-out for local monitoring or use with other distribution products. The receiver features digital optical output to break multi-channel audio out to amplifiers for a better listening experience. No EDID or EQ adjustments are necessary as the units automatically adjust for compatibility and gain. For extending full 4K resolution with up to 60Hz, 4:4:4 chroma subsampling, and HDR10, with options for connecting a keyboard, mouse, and other USB peripherals, the EVEXKVM3 is a great plug and play solution for connecting the latest components!

The EVEXKVM3 includes two units: transmitting unit (EVEXKVM3-TX) and receiving unit (EVEXKVM3-RX). The transmitting unit is used to capture the HDMI input with KVM signals and carries the signals via one cost effective Cat6 cable. The receiving unit is responsible for equalizing the transmitted HDMI signal and reconstructing KVM signals. The EVEXKVM3 offers the most convenient solution for HDMI extension over a single Cat6 with Power over Ethernet, and is the perfect solution for any application.

NOTE: – All specifications and ratings for the EVEXKVM3 have been tested and confirmed using Cat6 cabling. Cat6 or better is strongly recommended for optimum performance, achieve rated distance, and to maximize resolution capabilities of this product. Cat5e is not recommended and may not achieve distance and/or resolution expectations.

4K HDMI® Extender with KVM

Part # EVEXKVM3

- Allows HDMI audio/video and KVM (keyboard, video, mouse) signals to be transmitted using a single Cat6/6A/7 Cable
- Extends 4K@60Hz, 4:4:4, and HDR10 up to 230ft/70m and 1080p up to 330ft/100m
- Extends USB control and data signals for keyboards, mice, and touchscreen displays
- Visually zero-latency (up to 30ms)
- Features bi-directional Power over Ethernet (PoE) technology which transmits power over Cat6, allowing the transmitter and receiver to be powered off a single power supply
- Supports multiple audio formats such as (Dolby TrueHD 7.1CH/Dolby Digital 5.1CH)
- Dynamic EDID for compatibility and plug and play operation
- HDMI loop-out for local monitoring or use with other HDMI distribution products
- Digital optical audio breakout for audio extraction
- Slim and compact design
- Dimensions: 5.9" W x 4.2"H x 1.1"D (150mm x 107mm x 28.4mm)
- Patent No. 9,710,038 B1

SPECIFICATIONS

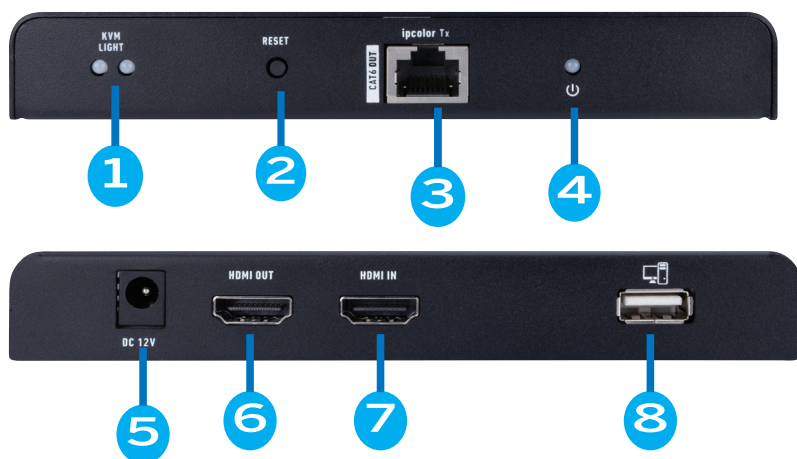
HDMI	2.0b
HDCP	2.2/1.4
Resolution	480i, 480p, 800x600, 720p, 1024x768, 1366x768, 1280x800, 1600x900, 1280x960, 1680x1050, 1080i, 1080p, 3840x2160@24/25/30/50/60Hz, 4096x2160@24/25Hz
Supported Audio Formats	LPCM/DTS-HD/DTS-Audio/Dolby Digital 5.1
Input/Output HDMI Lengths	up to 8m
USB Version Supported	1.1
Transmission Distance.....	230ft/70m for 4K@60Hz with HDR10
Power Supply	12V, 2A
Working Temperature.....	-20~60C/-4~140F
Storage Temperature	-30~70C/ -22~158F
Humidity	0~90%RH
Material.....	Metal
Dimensions	5.9" W x 4.2"H x 1.1"D (150mm x 107mm x 28.4mm)
Weight	0.5 lbs (260g)

PACKAGE CONTENTS

- EVEXKVM3 (TX & RX)
- 12V/2A Power Supply
- USB Type A to USB Type A cable
- (8) Mounting Brackets
- (18) Screws
- Product Manual

PANEL DESCRIPTIONS

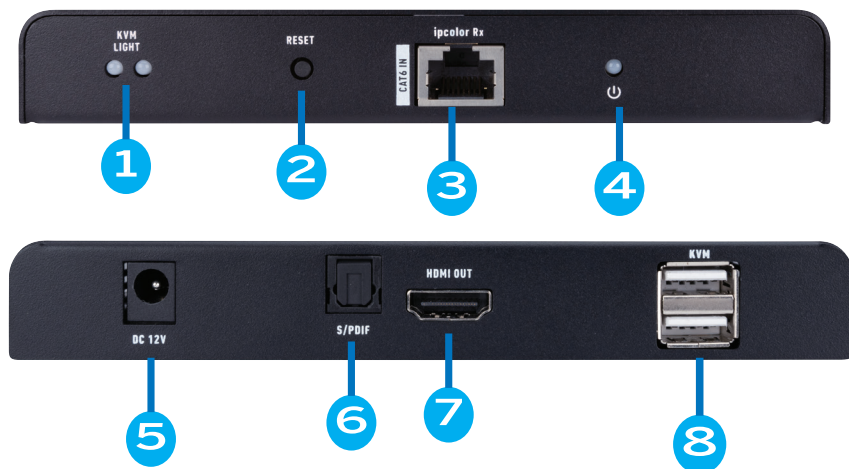
EVEXKVM3-TX (Transmitter Unit)



1. KVM LED Indicators:
 - a. Left indicator led illuminates solid when the TX is connected to a source via USB
 - b. Right indicator
 - b.1. LED flashes when there is a connection between the TX and RX units
 - b.1.1. Led flashes rapidly when there are USB signals being transferred
 - b.1.2. LED flashes slowly when there is no connection between TX and RX units (check cabling between both units if this occurs)
2. Reset: Press to reset/restart the extender
3. Cat6 Output: Connect a Cat6 cable with no coupling points, patch panels, etc. to the RX unit
4. Power/Signal LED Indicator:
 - a. Illuminates solid when connected to an HDMI source
 - b. Flashes when the extender is powered on, however no HDMI source signal is present
5. DC 12V: Connect the included 12V/2A power supply to power the extender unit (Powering this unit up requires no power supply needed at the RX unit)
6. HDMI Loop-out: Connect a local display or monitor
7. HDMI Input: Connect a source such as a Security NVR/DVR, computer, NAS system, etc
8. USB type A port: Connect the included USB cable to the host/source device for KVM control

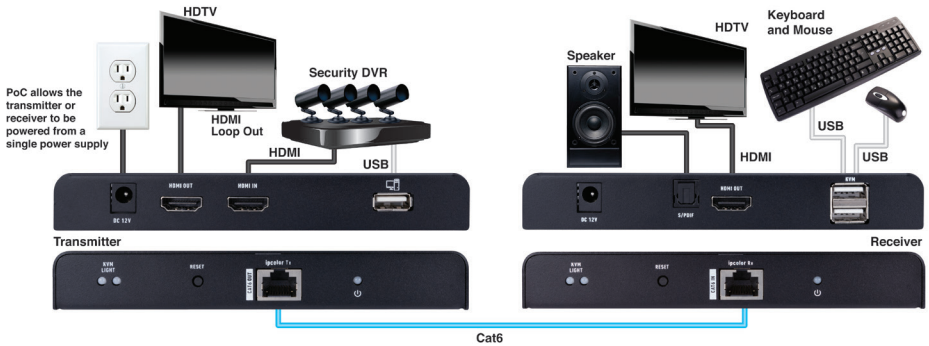
PANEL DESCRIPTIONS

EVEEXVM3-RX (Receiver Unit)



1. KVM LED Indicators:
 - a. Left indicator led illuminates solid when lower USB port is connected to a USB peripheral
 - b. Right indicator led illuminates solid when upper USB port is connected to a USB peripheral
2. Reset: Press to reset/restart the extender
3. Cat6 Input: Connect a Cat6 cable with no coupling points, patch panels, etc. to the TX unit
4. Power/Signal LED Indicator:
 - a. Illuminates solid when connected to an HDMI source and receiving signal from the TX unit
 - b. Flashes when the extender is powered on, however no HDMI source signal is present
5. DC 12V: Connect the included 12V/2A power supply to power the extender unit (Powering this unit up requires no power supply needed at the TX unit)
6. SPDIF Output: Extracts/De-embeds digital audio from the HDMI source
7. HDMI Output: Connect a display such as an HDTV, Projector, or Touch Panel
8. USB type A ports: Connect the included USB cable to a keyboard, mouse, and/or touch panel

CONNECTION DIAGRAM



CONNECT AND OPERATE

1. Connect a source such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI input of the Transmitting unit
2. Connect a display such as an HDTV or HD Projector or monitor to the HDMI output on the Receiving unit
3. Connect a single Category 6/6A/7 up to 230ft/70m to the RJ45 output of the Transmitting unit, and the other end to the RJ45 input of the Receiving unit. A home-run category cable is strongly recommended, any coupling point results in signal loss that could affect the video signal
4. Connect the USB port on the Transmitting Unit to the source; Connect the USB connection(s) on the Receiving Unit to a keyboard, mouse, touchscreen monitor, etc.
5. OPTIONAL: Connect an amplifier, soundbar, or audio distribution component to the S/PDIF digital optical output on the Receiving unit
6. For power, plug in either the Transmitting unit or Receiving unit with the included power supply, opposite unit will not have to be plugged in as it features Power over Ethernet (PoE)
7. Power on each device in the same sequence (receiver and transmitter will already be powered when either unit is plugged in.)

EDID

Extended Display Identification Data (EDID) is a data structure provided by a digital display to describe its capabilities to a video source (e.g. graphics card or set-top box). In a nutshell, the display provides its EDID info to the source to send the proper signal format, this is essential for a proper handshake to occur.

The EVEXKVM3 is equipped with EDID management, however there is no need to adjust any dip switches or dials, the unit automatically reads the EDID from the display and saves it internally. This feature was created for the installer in mind, for a plug and play installation!

KVM PASS-THROUGH

The KVM extension system allows you to control the source that is connected to the extender unit, from the display location using USB ports. There are two important things to note when setting up the KVM system:

1. The USB port on the Transmitting unit (TX) is a USB type A port, use the included USB type A to type A cable to connect the extender unit to the USB port of the source or host computer
2. The (2) USB 1.1 ports on the Receiving unit (RX) can be connected to USB capable devices, such as keyboards, mice, as well as well for touch screen monitors, to be controlled by the source or host computer

TROUBLE-SHOOTING

1. Best results are usually achieved when the source and display resolutions are the same. If resolutions differ, the extenders will try to adjust the signal to match the resolution of the HDTV with the lowest resolution. This will result in a picture with a lower resolution on the other HDTV sets.
2. If you do not get audio and video, access the "setup" menu on the TV to adjust the audio and video settings. If the HDMI control circuit cannot establish a handshake, then there usually will be no audio or video in addition to a blue or black screen with a statement similar to "this protocol not supported" or "weak signal".
3. If the above mentioned messages display, reset the receiver by disconnecting the power supply. You can also disconnect all of the HDMI and power cables, wait 15 minutes for any voltages to decay and then reconnect all of the cables.
4. If you are still encountering issues, attempt the "hot-plug concept. With all of the HDMI cables disconnected, turn on the source and plug in the HDMI cable into it's output, then power up the Vanco unit and plug the HDMI cable into it's input, finally turn on the display and plug the HDMI cable from the receiver into it. This activates all of the devices in corresponding order and results in a signal being plugged into a device that is on and will attempt to connect the signal.
5. Most of the major source and display manufacturers employ a proprietary control channel to communicate between devices from the same manufacturer. Sometimes this can interfere with the HDMI control circuit or the authentication of the signal. Call the manufacturer if you experience this issue. Sometimes a player, an audio/video receiver, or a cable/satellite box may not have the latest software update, usually this can be downloaded from the manufacturer's website.

SAFETY AND NOTICE

The EVEXKVM3 has been tested for conformance to safety regulations and requirements, and has been certified for EVEXKVM3 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit
- Do not attempt to service this unit yourself, except where explained in this manual
- Provide proper ventilation and air circulation and do not use near water
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface
- Use only the power adapter and power cords and connection cables designed for this unit
- Do not use liquid or aerosol cleaners to clean this unit
- Always unplug the power to the device before cleaning

LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com.

When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call.

Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.

All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

For additional information, such as helpful installation videos, etc. please visit www.vanco1.com

LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.



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