



## EV4KWHDMI Product Manual

# 4K Wireless HDMI Extender with HDMI Loop-Out

### Safety Instructions

**For optimum performance and safety, please read these instructions carefully before use and keep this manual for future reference. Please have the part number, serial number, and invoice available when requesting support.**

- To prevent electric shock, please ensure that all apparatus is properly grounded.
- Place the device in a well-ventilated area, do not block any ventilation openings.
- Do not expose this apparatus to rain or place it near water. Any liquid that goes into the apparatus may cause a failure, fire, or electric shock.
- Do not place the device on an uneven or unstable surface. The device may fall resulting in a malfunction.
- Never insert anything metallic into the open parts of this apparatus. This may cause a danger of electric shock.
- If a third-party power supply is used, please ensure that the power supply specifications meet the product requirements.

### Introduction

The Evolution by Vanco EV4KWHDMI Wireless HDMI Extender with IR, extends 4K ultra-high definition video and audio signals up to 164ft/50m wirelessly. Directional IR allows for the source to be controlled wirelessly at the display location. Features an HDMI loop-out, where an additional local display can be connected. With no line of sight required, the wireless signal can travel through floors and walls. If a WiFi signal can reach it, the EV4KWHDMI can. The EV4KWHDMI is a perfect plug and play solution for applications where a cable cannot be run, such as a TV mounted above a mantel or outdoors on a patio.

- Transmission distances may vary depending on the environment.
- Signals may be reduced or completely lost by solid structures such as walls, bricks, and glass.
- The surrounding wireless signal may cause certain interference to the transmission, and the channel can be switched to reduce the interference.

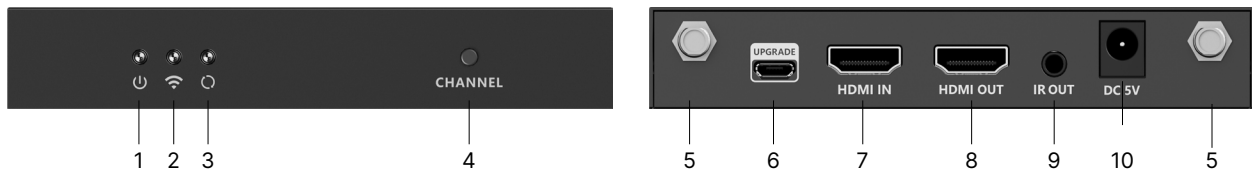
### Product Features

- Supports up to 4K@60Hz resolution
- Wireless transmission up to 164ft/50m (line of sight) of low-latency UHD signals
- HDMI loop-out to connect an additional local display
- HDCP 2.2/1.4 compliant
- Supports LPCM 2.0ch 32KHz/44.1KHz/48KHz Audio Formats
- SSID pairing and channel switching to avoid interference
- IR pass-through to control the source at the display location wirelessly

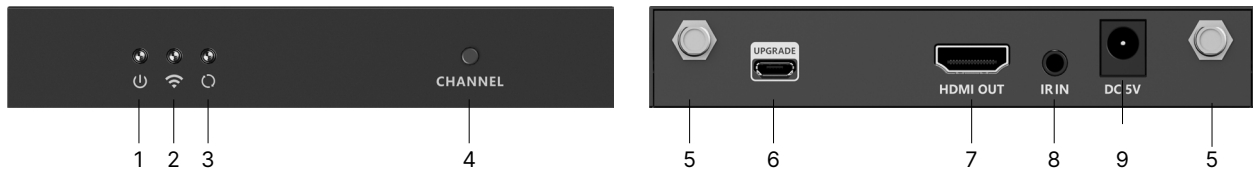
## Package Contents

- (1) Transmitter unit (TX)
- (1) Receiver unit (RX)
- (2) 5V/2A power adapter
- (1) IR receiver extension cable
- (1) IR blaster extension cable
- (4) Antennas
- (4) Mounting ears
- (10) Screws
- (2) Grounding screws
- (1) Quick start guide

## Panel Descriptions



Transmitter Unit (TX)		
1	Power indicator	The indicator will emit blue when the power is turned on
2	WiFi indicator	<ul style="list-style-type: none"> <li>a) Slow flash: waiting for connection</li> <li>b) Steady on: connection successful</li> <li>c) Quick flash: SSID Pairing mode</li> </ul>
3	Signal indicator	<ul style="list-style-type: none"> <li>a) Light off: no HDMI signal</li> <li>b) Steady on: HDMI signal is transmitting</li> <li>c) Quick flash: restore factory settings</li> </ul>
4	Channel switch button	<p>Multiple extenders can be utilized in one application, however to avoid any interference, each pair must be set to their own specific channel</p> <ul style="list-style-type: none"> <li>a) press to switch channels</li> <li>b) Press and hold 5s for SSID pairing</li> <li>c) Press and hold 10s for restore factory settings</li> </ul>
5	Antenna connectors	Connect the included antennas
6	Micro USB port	Used for firmware upgrade
7	HDMI input	Connect an HDMI source device
8	HDMI output	Connect a local HDMI display device
9	IR out	Connect with the included IR blaster extension cable
10	Power input	Connect with the included DC 5V/2A power adapter



### Receiver Unit (RX)

1	Power indicator	The indicator will turn blue when the power is turned on
2	WiFi indicator	<ul style="list-style-type: none"> <li>a) Slow flash: waiting for connection</li> <li>b) Steady on: connection successful</li> <li>c) Quick flash: SSID Pairing mode</li> </ul>
3	Signal indicator	<ul style="list-style-type: none"> <li>a) Light off: no HDMI signal</li> <li>b) Steady on: HDMI signal is transmitting</li> <li>c) Quick flash: restore factory settings</li> </ul>
4	Channel switch button	<p>Multiple extenders can be utilized in one application, however to avoid any interference, each pair must be set to their own specific channel</p> <ul style="list-style-type: none"> <li>a) press to switch channels</li> <li>b) Press and hold 5s for SSID pairing</li> <li>c) Press and hold 10s for restore factory settings</li> </ul>
5	Antenna connectors	Connect with antennas
6	Micro USB port	Used for firmware upgrade
7	HDMI output	Connect with local HDMI display device with HDMI cable
8	IR in	Connect with IR receiver extension cable
9	Power input	Connect with DC 5V/2A power adapter

## 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 using the IR pass-through function, connect the IR blaster extension cable into the IR OUT port of the transmitter, and connect the IR receiver extension cable into the IR IN port of the receiver.
  - a. The emitter of the IR blaster extension cable should be as close as possible to the IR receiving window of the source device.
  - b. Point the remote control at the receiving head of the IR receiver extension cable to operate.
3. Plug the power supply into the devices to get started.
4. In the case of multiple sets being used at the same time in the same area. In order to prevent mutual interference, switch each set of transmitters and receivers to a different channel after they have been manually paired with the SSID.



## SSID Pairing

There are four channels that can be utilized in case of interference from other wireless signals at the application, or to utilize multiple wireless HDMI extenders in one application. Set each pair to the same channel to avoid interference from other wireless HDMI extenders.

**One transmitter can be sent to multiple receivers to essentially split a source signal wirelessly, however, receivers are not sold separately.**

1. Enter the SSID pairing mode by holding the transmitter's channel switch buttons for five seconds, then the receiver's channel switch button for five seconds. Both WiFi connection indicators will then flash quickly in yellow.
2. When the SSID pairing is successful, the WiFi indicators on both units will change from quick flashing to slow flashing or steady on.

Channel 1	5.180 GHz
Channel 2	5.200 GHz
Channel 3	5.220 GHz
Channel 4	5.240 GHz

## Product Specifications

Items		Specifications
Power supply	Voltage/current	DC 5V/2A
	Power consumption	TX ≤ 6W, RX ≤ 4W
HDMI performance and interface	HDMI version	HDMI 2.0
	HDCP version	HDCP 1.4/HDCP 2.2
	Audio formats	LPCM 2.0ch 32KHz/44.1KHz/48KHz
	Maximum transfer rate	18Gbps
	Resolution supported	3840x2160@24/30/50/60Hz, 1080P@50/60Hz, 720P@50/60Hz, 1920x1200, 2560x1440, 2560x1600
	Input & output TMDS signal	0.7~1.2Vp-p (TMDS)
	Input & output DDC signal	5Vp-p (TTL)
Transmission	Wi-Fi Frequency bands	5.18~5.24 GHz
	Transmission distance	≤ 50m
	Latency	130ms
	Connection types	One-to-one
	SSID pairing	5.18, 5.2, 5.22, 5.24 GHz
Protection level	ESD protection	1a contact discharge level 3 1b air discharge level 3 Standard: IEC61000-4-2
IR performance	Infrared frequency	20~60kHz
	Receiving range	≤ 5m
Operating environment	Working temperature	-20~60°C
	Storage temperature	-30~70°C
	Humidity (no condensation)	0~90% RH
Physical properties	Dimensions	TX: 115(W) x 125(L) x 20.6(H) mm / 4.5(w) x 4.9(L) x 0.8(H) in
		RX: 115(W) x 125(L) x 20.6(H) mm / 4.5(w) x 4.9(L) x 0.8(H) in
	Color	Black
	Material	Iron
	Net weight	TX: 353g, RX: 346g

## 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 10 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.

## 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. For additional information, please visit [www.vanco1.com](http://www.vanco1.com).

## Technical Support

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

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](mailto:techsupport@vanco1.com). When calling, please have the part number, serial number (affixed to the bottom of the unit) and invoice available for reference during the call.

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.

### Vanco Tech Support

Phone: 1-800-626-6445

Email: [techsupport@vanco1.com](mailto:techsupport@vanco1.com)

Web: [www.vanco1.com](http://www.vanco1.com)

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