

2x1 HDMI® SWITCH

with Multiview and PIP



**Vanco Part Number:
EVSW21MV**

**2x1 HDMI® Switch
with Multiview and
Picture-in-Picture**

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 EVSW21MV 2x1 HDMI Switch with Multiview and PIP allows for two sources to be connected and be viewed one at a time like a standard switcher, or allows for Multiview. Tired of switching channels back and forth? Multiview allows for both sources connected to be viewed on the same display! There are two modes for Multiview, Side-by-side is a configuration that shows both sources in a split screen format, while PIP (Picture in Picture) shows a smaller screen within a larger screen that can be switched. For connectivity and control, the EVSW21MV includes an IR remote control and RS-232 serial cable for any custom control setup. The EVSW21MV is the perfect solution for watching multiple sporting events, having multiple people share the same display, or to show advertisements in a commercial application.

2 x 1 HDMI® Switch with Multiview and Picture-in-Picture

Part # EVSW21MV

- Multiview 2x1 HDMI switcher that allows both sources to be displayed simultaneously
- Two multiview modes available: Side-by-side (split screen) and PIP (Picture in Picture)
- Capable of passing and scaling 16:9 and 4:3 aspect ratios
- Side-by-side and PIP viewing options
- Output can be scaled to 6 different resolutions: 1080p, 720p, 1080i, 1024x768, and 1360x768
- Supports inputs up to 1080p/60Hz High Definition Resolution
- Up/Down scaler video function
- Supports multiple output resolutions in PIP mode
- Compatible with LPCM, Dolby, and DTS audio formats
- Dimensions: 5.5" W x 1" H x 2.75" D

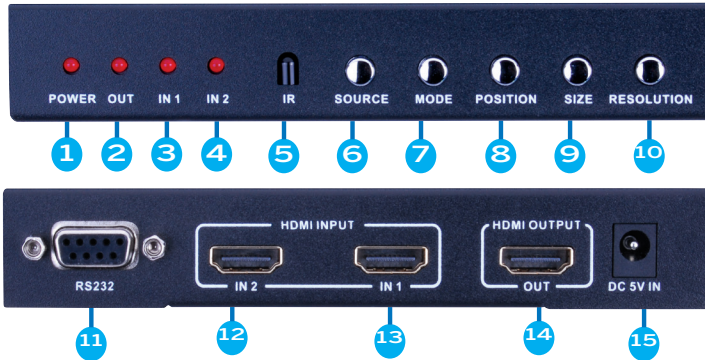
SPECIFICATIONS

Video Bandwidth	225MHz(6.75Gbps)
Input Ports	2 × HDMI (Female type)
Output Ports	1 × HDMI (Female type),
Audio output.....	PCM, 5.1, 7.1CH, Dolby 5.1, DTS5.1
Input Resolution.....	480i60Hz,480p60Hz,576i50Hz,576p50Hz,720p50/60Hz, 1080i50/60Hz,1080p24/30/50/60Hz,800x600@60,1024x768@60,1280x720@60,1920x1080@60
Output Resolution	1080p, 720p, 1080i,1024x768,1360x768
ESD Protection	Human Body model:±8 kV (air-gap discharge) ±4 kV (contact discharge)
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	70 mm (W)×140mm (D)×25 mm (H)
Weight	300 g
Chassis Material.....	Metal
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)
Power Consumption (Max)	10W

PACKAGE CONTENTS

- EVSW21MV HDMI Switcher
- 5V DC Power Supply
- IR Remote Control
- RS-232 Serial Cable
- Product Manual

PANEL DESCRIPTIONS



1. POWER LED: Illuminates when the switcher is connected to power
2. OUTPUT LED: Illuminates when a display is connected and is powered on
3. IN 1 LED: Illuminates when the source connected to "IN 1" is selected as the main source
4. IN2 LED: Illuminates when the source connected to "IN 2" is selected as the main source.
5. IR: IR sensor
6. SOURCE: Toggle button to select the main source
7. MODE: Toggle button to cycle through the following display modes:
 - Mode 1: Single-view mode
 - Mode 2: PIP (Picture in Picture) mode
 - Mode3: Side-by-Side (Split Screen) (4:3 format)
 - Mode 4: Side-by-Side (Split Screen) (16:9 format)
8. POSITION: Toggle button which changes the location of the smaller screen in PIP mode (smaller screen will relocate to upper left, upper right, lower left, and lower right locations of the main screen)
9. SIZE: Toggle button which changes the size of the smaller screen in PIP mode
10. RESOLUTION: Toggle button which adjusts to the following resolution formats:

<i>NO.</i>	<i>Resolution</i>
1	1080p, Main image audio
2	720p, Main image audio
3	1080i, Main image audio
4	1024x768, Main image audio
5	1360x768 Main image audio

11. RS-232: Connect to a computer or 3rd party control system via RS-232 cable (provided) for external control
12. HDMI IN 2: Connect a source such as a Set Top Box, Game Console, or media player/streamer
13. HDMI IN 1: Connect a source such as a Set Top Box, Game Console, or media player/streamer
14. HDMI OUTPUT: Connect an HDMI display such as an HDTV or Projector
15. DC 5V IN: Connect the included power supply to power the switcher

MODES OF OPERATION REMOTE CONTROL

1. Power Button
2. IN1: Selects Input 1 as the main source
3. IN2: Selects Input 2 as the main source
4. SIZE: Adjusts the size of the PIP tile (in PIP mode only)
5. POSITION: Adjusts the position of the PIP tile (in PIP mode only)
6. MODE: Cycles through the different modes (standard switching, Side-by-Side, PIP)
7. RESO.: Adjusts the resolution of the video signa



Mode 1



Mode 2



Mode 3



Mode 4



CONNECTION DIAGRAM



CONNECT AND OPERATE

1. Connect sources such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI inputs (IN 1 and IN 2)
2. Connect a display such as an HDTV or HD Projector to the HDMI output (OUT)
3. OPTIONAL: Connect the provided RS-232 cable from the switcher to a PC or 3rd party integration system for external control
4. For power, connect the provided power supply

At this point the display connected should display the source signal connected to the switcher. If no signal is being displayed, check all HDMI cables connected. If a display is having difficulty receiving a signal, access the display's menu and adjust the resolution (lowest to highest until signal is displayed). A 24 Hz vertical refresh rate may work better than 60 Hz or higher.

SOFTWARE USER INTERFACE

The screenshot displays the software user interface for a switcher, organized into several panels:

- COM Panel (1):** Includes a "Port" dropdown menu and a "Connect" button.
- OUTPUT Panel (2):** Features a "Resolution" dropdown menu, a "Set" button, and two input selection buttons labeled "IN1" and "IN2".
- MODE Panel (3):** Contains four icons representing different viewing modes: Single source, PIP, Side-by-Side (4:3), and Side-by-Side (16:9).
- PIP MODE Panel (4):** Shows four icons for selecting the position of the PIP tile: upper left, upper right, lower left, and lower right.
- PIP SIZE Panel (5):** Includes a "Size" dropdown menu with a "Set" button. The dropdown menu is open, showing options for "Small", "Medium", and "Large".
- RESET Panel (6):** Contains a "Reset" button and the text "Restore The Factory Settings".
- Upgrade Panel (7):** Features an "Open BIN File" button, an "Open" button, and an "Upgrade" button.

1. **COM Port:** Select the COM Port of the PC's USB port that will be used to connect to the switcher
2. **OUTPUT:** Select the desired resolution, also able to set both inputs, or separate resolutions for each input
3. **VIEWING MODES:** (From left to right) Single source, PIP, Side-by-Side (4:3), and Side-by-Side (16:9)
4. **PIP MODES:** Select the desired position of the PIP tile (upper left, upper right, lower left, and lower right)
5. **PIP SIZE:** Select the desired size of the PIP tile
6. **RESET:** Reset to Factory Default
7. **FIRMWARE UPDATE:** While connected and with the switcher turned on, locate the appropriate .bin file (Vanco will provide any f/w updates to the product page on www.vanco1.com) that is saved to your PC. Use "Open" to locate the file, then click on "Upgrade" to perform update.

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. 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.
4. 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 EVSW21MV has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the EVSW21MV 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.

FCC STATEMENT

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.





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