

4K 4x1 HDMI® Switch with ARC and HDR



**Vanco Part Number
EVSW1042**

**4K 4x1 HDMI®
Switch with ARC and
HDR**

EVOLUTION
BY 

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 HDMI 4x1 Switcher (EVSW1042) allows 4 HDMI sources to be distributed to 1 display, with the ability of controlling each source connected and input switching from the display remotely via IR. Allows multiple sources to be switched on a single display by creating additional HDMI inputs. The EVSW1042 is capable of up to 4K/60Hz Ultra High Definition resolution, 4:4:4 chroma capability, and HDR with HDCP 2.2, making this unit the most up to date HDMI switcher for 4K transmission. Also features EDID management for audio, which allows selection of a preferred type of audio transmission. Equipped with ARC (Audio Return Channel) functionality, which allows the connected ARC equipped display to send audio data "upstream" to an ARC equipped A/V receiver or surround audio controller, via toslink or stereo output for expanded audio distribution. In addition, the EVSW1042 features RS-232 for control of the main switching unit as well as IR routing, which allows for remote source control at the display location. The result is a great solution for HDMI switching which offers multiple features and full 4K capability, the EVSW1042 4x1 Switcher is a great choice for any application.

4K 4x1 HDMI® Switch with ARC and HDR

Part # EVSW1042

- Allows 4 HDMI sources to be switched to 1 display
- Supports 4K2K (2160p @60Hz w/ 4:4:4 color sampling) Ultra High Definition Resolutions
- Supports HDR (High Dynamic Range)
- Features Audio EDID management which allows selection of preferred audio channel
- Supports auto switching or manual switching mode
- IR pass-through for source control with included IR accessories
- Controllable via RS-232 and/or IR
- Supports ARC (Audio Return Channel) and CEC (Consumer Electronic Control) functionality
- Supports PCM, Dolby TrueHD, and DTS-HD Master Audio up to 7.1 CH audio formats
- Digital and analog audio outputs for audio extraction
- HDCP 2.2 compliant
- 5V DC Power Supply
- 7" W x .5" H x 3.3" D

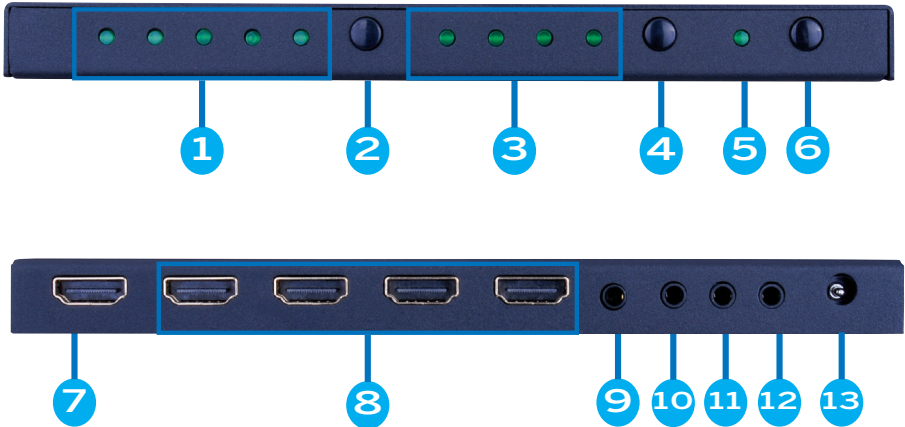
SPECIFICATIONS

Frequency Bandwidth	18Gbps
HDCP	2.2 Compliant (backwards compatible)
Input Ports	(4) HDMI Female ports, (1) IR EXT port and (1) RS232 port
Output ports	(1) HDMI Female port,(1) 3.5mm analog audio port and (1) Optical port
HDMI Video Output	480i ~1080p50/60, 4K2K@24/30/60Hz, 4:4:4 color subsampling; HDR and 3D Compatible
HDMI Audio Output	PCM, 2.1/5.1/7.1CH, Dolby 5.1, DTS5.1, Dolby-TrueHD, DTS-HD
ESD Protection	Human Body Model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Dimensions (mm).....	180 (D) x 85 (W) x 11.6 (H)
Weight	300g
Power Consumption (Max)	2.5W
Operating Temperature.....	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F

PACKAGE CONTENTS

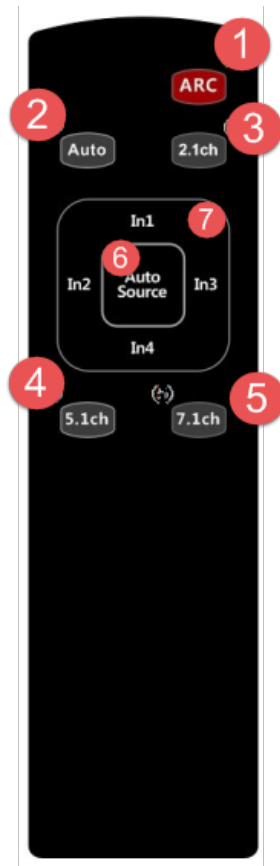
- EVSW1042 4x1 HDMI Switcher
- 5V/1A USB Power Adapter
- 5V USB to DC Power Supply cable
- IR Receiver
- (4) IR Transmitters
- 3.5mm Stereo (male) to 4- 3.5mm Stereo (Female) for IR OUT (WIR-1X4)
- Optical convert adapter (for SPDIF audio output)
- IR Remote
- Product Manual

PANEL DESCRIPTIONS



1. IN 1-4 LED: Illuminates to display which source is selected
2. AUTO/MANUAL SWITCHING SELECTION: Pressing this button activates "Smart Switching" where the unit will auto switch, or activates manual source switching
 - To activate either mode, press and hold button for 2 seconds, when in manual mode, press button without holding to switch sources, or use IR remote
3. EDID STATUS LED: Illuminates to display which audio format is selected; setting to Auto is utilizing the display's audio EDID
4. EDID SELECTION BUTTON: Pressing this button cycles through the audio EDID selections
5. ARC STATUS LED: Illuminates when ARC is activated (outputs through 3.5mm stereo output, or digital output using supplied optical adapter)
6. ARC SELECTION BUTTON: Press button to activate or de-activate ARC feature
7. HDMI OUTPUT: Connect an HDMI display such as an HDTV or Projector
8. HDMI IN 1-4: Connect a source such as a Set Top Box, Game Console, or media player/streamer
9. AUDIO BREAKOUT: When using ARC function, connect to an external amp via analog 3.5mm, or digital using the supplied optical adapter
10. RS-232: Connect to any RS-232 component for third party control
11. IR OUT: Connect the included IR splitter cable and IR Transmitters to control each source from display location
12. IR IN: Connect the included IR Receiver and place in location where the IR remote can transmit signal to
13. DC 5V IN: Connect the included power supply to power the unit

IR REMOTE



1. ARC BUTTON: Press to activate or deactivate ARC function
2. EDID AUTO AUDIO: Pressing will utilize the display's audio EDID
3. EDID 2.1ch AUDIO: Pressing will utilize a 2.1ch stereo EDID
4. EDID 5.1ch: Pressing will utilize a 5.1ch stereo EDID
5. EDID 7.1ch: Pressing will utilize a 7.1ch stereo EDID
6. AUTO/MANUAL SWITCHING SELECTION: Pressing this button activates "Smart Switching" where the unit will auto switch, or activates manual source switching
7. SOURCE SELECTION: Press corresponding inputs to select desired source

SOURCE SWITCHING

The EVSW1042 allows for manual or auto source switching, in MANUAL mode, the front panel or included IR remote gives the ability to switch sources. In AUTO mode, the switcher will:

1. Automatically switch to any source input that is turned ON
2. Automatically switch to the next input source (sequentially) that is already ON, if the current input selection is turned OFF

*Be advised that some sources "sleep" rather than fully turn off such as some set top boxes, smart devices, and media players. This may cause auto switching to not function as designed.

To Activate/Deactivate AUTO and MANUAL switching modes:



NOTE: In AUTO mode, you may override by manually selecting an input source via the front panel or IR remote, AUTO function will still be active unless deactivated.

IR PASS-THROUGH

The bi-directional IR system allows you to control the source that is connected to the extender unit, from the display; or the display from the source, not simultaneously. There are two important things to note when setting up the IR system:

1. The IR Receiver (IR RX) is always what you point your remote at to send an IR signal. This pigtail is placed at the display for controlling the source; or at the source for controlling the display.
2. The IR Blaster (IR TX) is what sends the IR signal to what you are intending to control, whether it's the source or the display. This pigtail is placed at the source; either pointed at the source, or placed on the front panel of the source, see below for placement tips. Or placed at the display to control the display from the source.

IR Receiver (RX)

To control the switch: Plug the IR Receiver into IR IN port of the switch

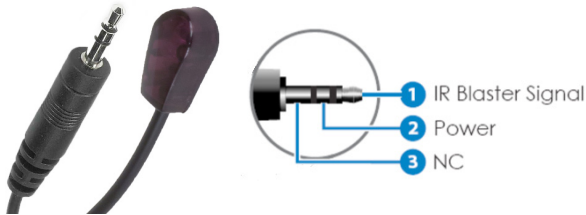


IR Transmitter (TX)

To control the sources: Connect the provided WIR-1X4 into the IR OUT port of the switch

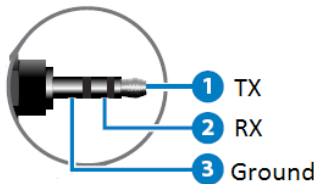


Connect the provided IR TX cables into each 3.5mm input of the WIR-1X4. Use one IR RX for each source being used with the EVSW1042.

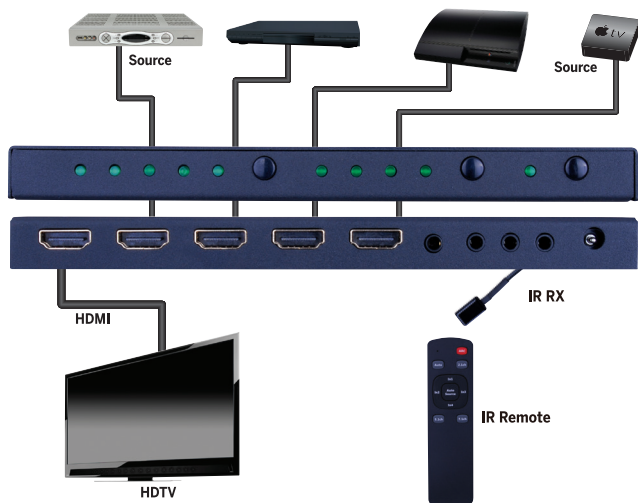


RS-232 CONTROL

The EVSW1042 allows for RS-232/Serial control using a 3.5mm Stereo Connection. Please use the diagram below as reference for 3rd party integration.



CONNECTION DIAGRAM



CONNECT AND OPERATE

1. Connect your sources such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. on the unit with HDMI cable(s). Insert and extract cables carefully with the power switched off. Connecting and disconnecting while the unit is powered can result in damage to circuitry.
2. If you are routing digital or analog audio to an amplifier or audio video receiver, do so by either connecting a 3.5mm stereo cable OR use the provided optical audio adapter with an optical audio cable in the audio out port of the switch. This is necessary when trying to utilize the ARC feature of the switch.
3. NOTE: The ARC and CEC functions MUST be capable and be enabled within your display settings in order to use ARC
4. Connect the HDMI outputs that go to the displays
5. OPTIONAL: Connect the provided IR receiver to the IR IN port on the switch to extend the range of controlling the switch via IR
6. OPTIONAL: Connect the provided WIR-1X4 into the IR OUT port of the switch. Connect the provided IR TX cables to the female ports of the WIR-1X4 then the head of the IR TX cables to each source for remote control of the connected sources.
7. OPTIONAL: Connect an RS-232 cable from the RS-232 port on the switch to a computer or 3rd party controller
8. Connect the provided DC 5V power supply
9. Connect the power supply to an available electrical outlet and power on the device

NOTE: ARC, EDID, and switching mode changes can be made when the unit is powered ON. Vanco High Speed HDMI cables are strongly recommended for use with this product to ensure best results. Incorrect placement of IR Receiver may result in the failure of the unit. Please check carefully before plugging in the IR accessories into the respective IR ports.

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 its output, then power up the Vanco unit and plug the HDMI cable into its 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 (CEC). 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.
6. If you have problems with the IR control circuit, make sure that the IR RX pigtail is plugged into extender receiver and pointed at the display, and the IR TX pigtail is attached to the extender sender and pointed at the source.

SAFETY AND NOTICE

The EVSW1042 has been tested for conformance to safety regulations and requirements, and has been certified for EVSW1042 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.



Vanco® International

506 Kingsland Drive
Batavia, Illinois 60510

call: 800.626.6445

fax: 630.879.9189

visit: www.vanco1.com