



HDMI® 8x8 4K Matrix
Selector Switch with
HDR

Vanco Part Number:
280688

Technical Support

www.vanco1.com • info@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.

FEATURES

The Vanco 280688 8x8 4K Matrix Selector Switch allows 8 HDMI sources to be distributed to up to 8 displays simultaneously. Have multiple sources displayed on any display or have a single source duplicated on multiple displays, full flexibility. This matrix unit is capable of up to 4K@30Hz Ultra High Definition resolution and Dolby/DTS multi-channel audio distribution. Simple control is provided using the front panel buttons, included IR remote, remotely via IR Receivers at displays, RS-232, and TCP/IP. Also features EDID management, which allows and encourages source and display "handshake" for seamless integration. In addition, 280688 is also equipped with RS232/IP based software for easy setup, control, and firmware updates which can be found at www.vanco1.com. For reliable HDMI distribution and control over short distances, the 280688 Matrix Selector Switch is a great choice for any application.

HDMI® 8x8 4K2K Matrix Selector Switch

Part # 280688

- Allows up to 8 HDMI sources to be distributed simultaneously to up to 8 displays
- Supports resolutions up to 4K@60Hz with HDR, 48-bit deep color
- Advanced EDID management for rapid integration of sources and displays
- Dolby TrueHD and DTS-HD master audio pass through HDMI output
- Full 3D pass through
- Choose from 4 switching modes – Front Panel buttons, IR remote control, RS-232 control, and TCP/IP control
- HDCP Compliant
- Wideband bi-directional IR pass-through (30 to 60 kHz) (8 IR Transmitters and 9 IR Receivers included)
- Dimensions: 17.25" (438mm) W x 1.63" (41mm) H x 7.19" (182mm) D

SPECIFICATIONS

HDCP Compliance	Yes
Video Bandwidth	Single-link 225Mhz [2.97 Gbps]
Video Support	480i/480p/720p/1080i/1080p @60/2160p @30 36-bit color
Audio Support	Surround Sound (up to 7.1 ch) or stereo digital audio
ESD Protection	[1] Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
Input	8x HDMI / 1x RS-232 / 1x Ethernet
Output	8x HDMI
HDMI connector	Type A 19 pin female
RJ-45 connector	WE/SS 8P8C
RS-232 connector	DB-9 [9-pin D-sub female]
3.5mm connector	[System IR] Receives IR commands from remote control; Analog audio output (outputs 5-8)
RCA connector	Digital audio output (outputs 1-4)

MECHANICAL SPECS

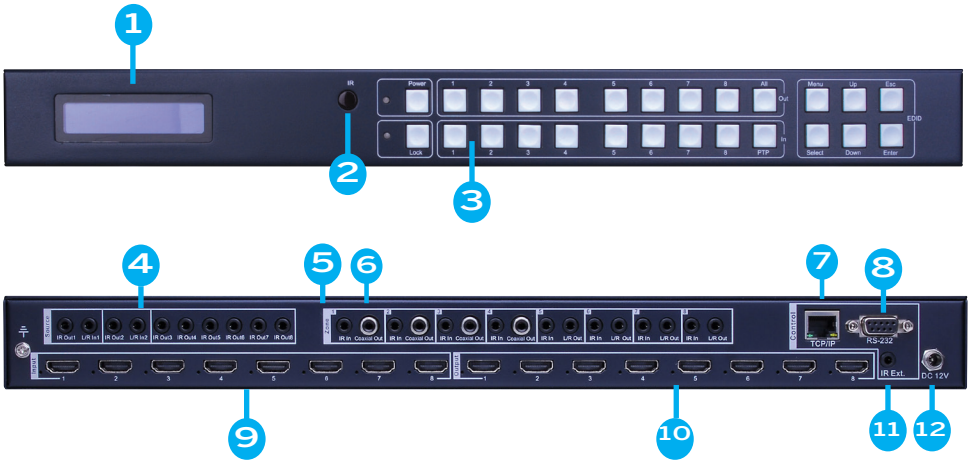
Housing	Metal enclosure
Power Supply	12V 5A DC
Power consumption	20 watts (max)
Operation temperature	32~104 °F
Storage temperature	-4 ~140 °F
Relative humidity	20~90 % RH (no condensation)

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- (1) 280688 HDMI 8x8 Matrix Selector Switch
- (9) IR Receiver (RX)
- (8) IR Blaster (TX)
- (1) DC 12V5A power supply
- (1) Rack-mounting ear set
- (1) IR remote control
- (1) Installation software CD
- (1) User Manual

PANEL DESCRIPTIONS- 280688



1. Source LED indicator – shows which sources are displayed on each output
2. IR receiver eye – use the remote to send IR signals to for switching with the included remote
3. HDMI input/output selection button 1 to 8 – Press the HDMI input to send to any HDMI output
4. IR OUT 1-8: Connect included IR TX pigtails, place or stick each TX pigtail on the corresponding source (ensure the pigtail is placed near or on top of the source's IR eye, see IR section for instructions)
5. IR IN 1-8: Connect included IR RX pigtails, to be used at each display for matrix switching control and source control
6. Coaxial digital output – extracts digital audio for each display, can be used to connect audio distribution components such as an amplifier (available on outputs 1-4)
7. RJ45 port – for TCP/IP control
8. RS232 port – connect serial cable to PC for software control and management
9. HDMI inputs 1 through 8 – connect HDMI sources
10. HDMI outputs 1 through 8 – connect HDMI displays
11. IR receiver eye – Matrix unit can be hidden with an IR receiver pigtail leading out to continue to control switching with the included IR remote
12. 12V DC port – connect included power supply

EDID

The EDID switch allows for EDID learning or to pre-set an EDID to encourage a “handshake” between the display and source.

The EDID learning function is only necessary whenever any display on the HDMI output port is not outputting audio and/or video properly. Because the HDMI source devices and displays may have various level of capability in playing audio and video, the general principle is that the source device will output the lowest standards in audio format and video resolutions to be acceptable among all HDMI displays connected. In this case, a 720p stereo HDMI signal output would be probably the safest choice. The EDID function can also force the matrix to learn the EDID of the lowest capable HDMI display among others to make sure all displays are capable to play the HDMI signals normally.

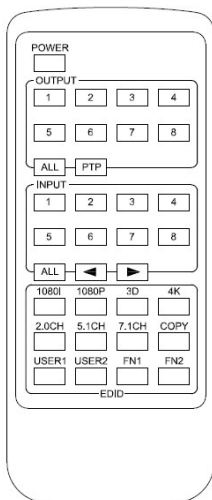
There are two methods for EDID Learning as shown below:

1. IR Remote Control: Please refer to the Operation Control – IR Remote Control section
2. Software Control: Please refer to the Operation Control – EDID section

EDID Settings:

Here is a list of the supported EDID settings:

Select EDID
1080i, Stereo Audio 2.0
1080i, DOLBY/DTS 5.1
1080i, HD AUDIO 7.1
1080p, Stereo Audio 2.0
1080p, DOLBY/DTS 5.1
1080p, HD AUDIO 7.1
3D, Stereo Audio 2.0
3D, DOLBY/DTS 5.1
3D, HD AUDIO 7.1
4K2K, Stereo Audio 2.0
4K2K, DOLBY/DTS 5.1
4K2K, HD AUDIO 7.1
1024x768 DVI
1920x1080 DVI
1920x1200 DVI
User 1
User 2
Default: EDID



OPERATION CONTROL - IR REMOTE CONTROL

Selecting what you want to watch on each display.

Output and Input routing:

Simply select which TV or display (output #) you want to change the input on, then select the input number.

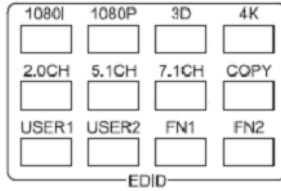
To scroll through all the inputs, instead of selecting the specific input, simply press the left or right arrow to go through each input.

To have one source displayed on all TVs, simply press ALL under OUTPUT section, then select which input you want to have duplicated on every display.

The PTP button will mirror all of the inputs and outputs, for example, Input 1 to Output 1, Input 2 to Output 2, etc.

EDID VIA IR REMOTE

The EDID can be adjusted from the included remote control, however it is recommended that the EDID be adjusted from the Software Control feature. This way, errors can be avoided by properly selecting the correct EDID setting



To send a fixed EDID to all inputs:

1. Select any combination or all of video formats 1080i, 1080p, 3D, 4K; audio formats 2.0CH, 5.1CH, 7.1CH by pressing these individual buttons
2. Then press the "ALL" button under the INPUT section

This will send the fixed EDID combination that you have chosen to all of the input sources that are connected.

To copy the EDID of a specific display to all inputs:

1. Press the "COPY" button
2. Press the specific OUTPUT number of the display you would like to copy the EDID from
3. Then press the "ALL" button under the INPUT section

This will send the EDID of the chosen display to all of the input sources that are connected.

OPERATION CONTROL - SOFTWARE CONTROL THROUGH RS-232 AND LAN PORT

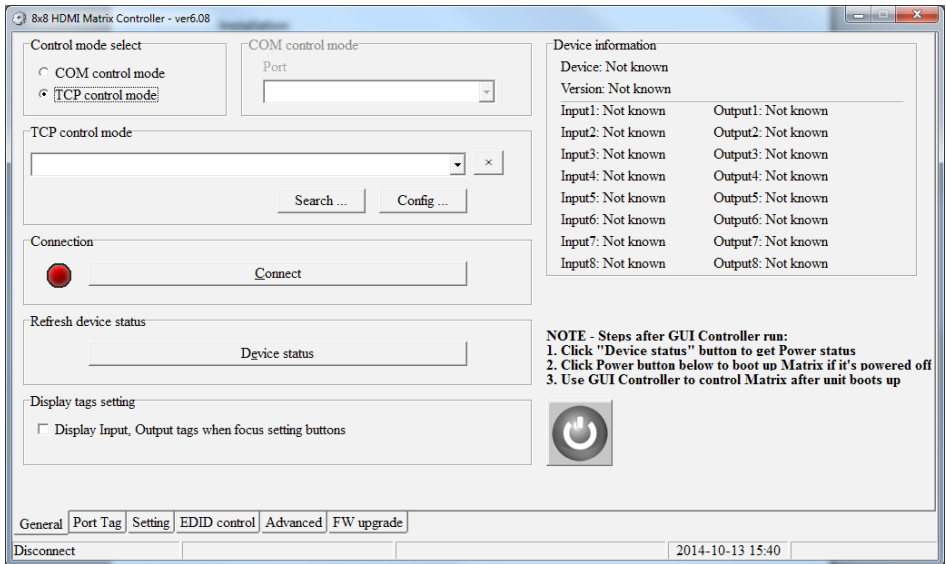
Vanco's Matrix Software Control allows the ability to control many different features of the matrix unit such as renaming inputs and outputs, controlling switching of each output, EDID management, customization, and the ability to upgrade the firmware.

1. System Requirement
 - 1) OS Information: MS WinXP/7
 - 2) Baud rate:57600
 - 3) Software size: 946KB
 - 4) Minimum RAM requirement: 256 MB

OPERATION CONTROL - SOFTWARE CONTROL THROUGH RS-232 AND LAN PORT CONTINUED

The first step is to copy the .exe file onto your computer, insert the included installation CD and copy the "8x8 HDMI Matrix Controller vx.x.exe" executable file onto your hard drive. Then go through the following steps:

1. Connect the PC to the Matrix unit via an RS-232 serial cable via the RS-232 port, or a Cat5e/6 via the TCP/IP (LAN) port.
2. Power up the Matrix unit, allow at least 5 seconds for the unit to completely boot up, a beeping sound will let you know once it is ready!
3. Run the Matrix Controller software that you have just saved onto your hard drive (double click on the icon), and this program will appear:



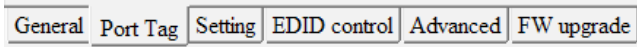
4. Select which connection (Control Mode Select) you have chosen, "COM" for RS-232 connection; TCP for Cat5e/6 connection.
 - a. For COM control mode, ensure that the correct Port is selected and is set within your PC, otherwise your PC will not connect to the Matrix unit!
 - b. For TCP control mode, you can find out what the IP address the Matrix unit will use by clicking on "Search..." under the TCP control mode section; ensure that the IP address is not being used by another device, otherwise they will conflict and the PC will not connect to the Matrix unit!
 - c. The "Config..." button allows you to manually set the IP information such as the address and MAC address
 - d. This will also be utilized for Web Control, it is important to note that an unused IP address needs to be entered so that there is no IP conflict



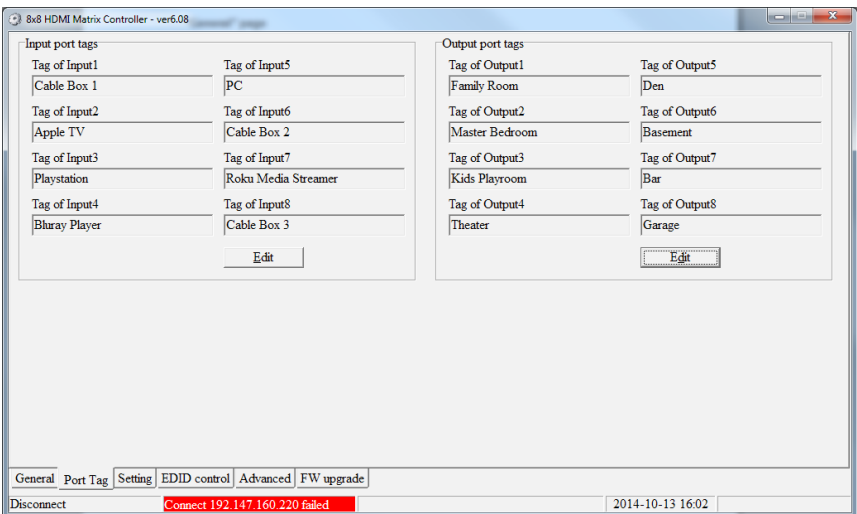
5. Click Connect to connect to the Matrix unit, a green status lets you know that you've successfully connected to the Matrix unit, a red status lets you know there's something wrong!

At this point you should now be connected to the Matrix unit and now have full control. Refresh device status will refresh all of the information on the right hand of the "General" tab including how many inputs/outputs are connected. You can also turn on and off the Matrix unit by clicking on the power button

Port Tag Tab

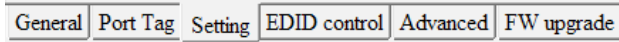


This tab allows you to customize the names of the inputs and outputs of your Matrix unit, this will make it much easier to route the Bluray player to the specific output, this way you don't have to guess what is Input 1 or what is Output 3. See below for an example:



Simply click on "Edit" for the Input port tags or the Output port tags to type in custom names.

Setting Tab



8x8 HDMI Matrix Controller - ver6.08

Output1

Output2

Output3

Output4

Output5

Output6

Output7

Output8

Output from Input

Name	Output1	Output2	Output3	Output4	Output5	Output6	Output7	Output8
Setting1	1	2	3	4	5	6	7	8
Setting2	1	2	3	4	5	6	7	8
Setting3	1	2	3	4	5	6	7	8
Setting4	1	2	3	4	5	6	7	8
Setting5	1	2	3	4	5	6	7	8
Setting6	1	2	3	4	5	6	7	8
Setting7	1	2	3	4	5	6	7	8
Setting8	1	2	3	4	5	6	7	8

General | Port Tag | Setting | EDID control | Advanced | FW upgrade

Disconnect Connect 192.147.160.220 failed 2014-10-13 16:09

This tab allows you to control the switching of your Matrix unit. You have the ability of switching each Output's source simply by clicking on the actual input number, or clicking left and right to scroll through each source:

Output1

Output2

Output3

Output4

Output5

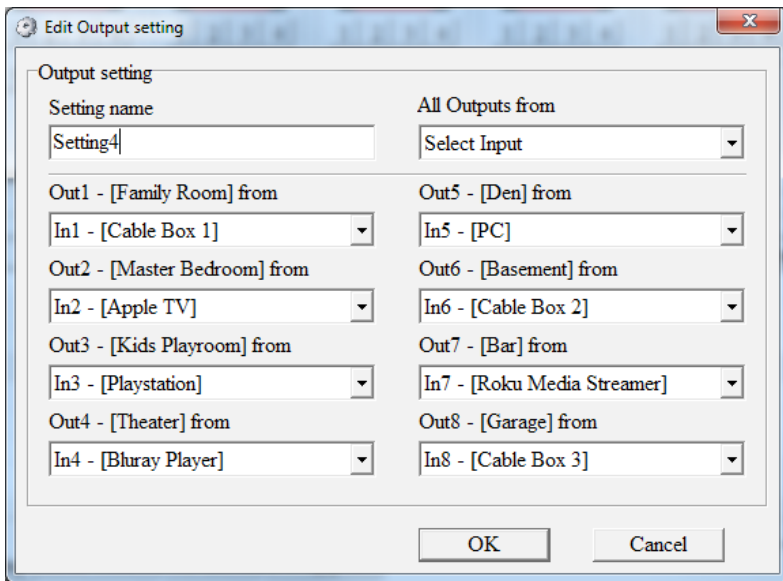
Output6

Output7

Output8

Output from Input

You can also customize pre-settings, very beneficial for a commercial application such as a bar. This way the bartender can choose a pre-setting based on an important sporting event. To customize each setting, click on the setting number and click on "Edit", then set each input/output and then click on "OK".



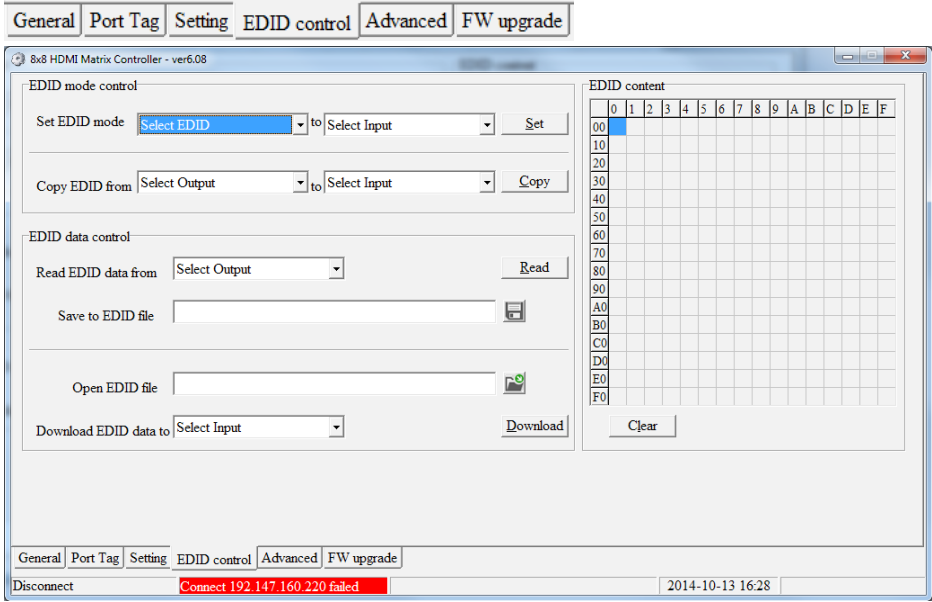
Clicking on "Set" will output that pre-setting.

Pre-Settings

Name	Output1	Output2	Output3	Output4	Output5	Output6	Output7	Output8
Setting1	1	2	3	4	5	6	7	8
Setting2	1	2	3	4	5	6	7	8
Setting3	1	2	3	4	5	6	7	8
Setting4	1	2	3	4	5	6	7	8
Setting5	1	2	3	4	5	6	7	8
Setting6	1	2	3	4	5	6	7	8
Setting7	1	2	3	4	5	6	7	8
Setting8	1	2	3	4	5	6	7	8

EDID Control Tab

General Port Tag **Setting** EDID control Advanced FW upgrade



8x8 HDMI Matrix Controller - ver6.08

EDID mode control

Set EDID mode: to

Copy EDID from: to

EDID data control

Read EDID data from:

Save to EDID file:

Open EDID file:

Download EDID data to:

EDID content

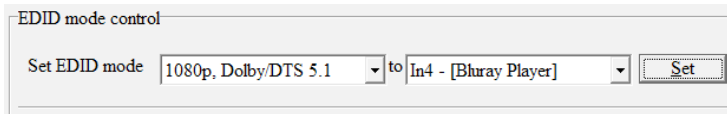
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00																
10																
20																
30																
40																
50																
60																
70																
80																
90																
A0																
B0																
C0																
D0																
E0																
F0																

General Port Tag **Setting** EDID control Advanced FW upgrade

Disconnect Connect 192.147.160.220 failed 2014-10-13 16:28

This EDID management tab can help out with any “handshake” issues between the sources and displays connected to the Matrix unit. Since there are multiple sources and displays, handshake issues can occur, there are a couple ways to set EDID:

1. Manually selecting a preset EDID, and applying to a specific input:

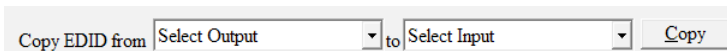


EDID mode control

Set EDID mode: to

- a. Select the desired preset EDID from the dropdown, then select the desired Input from the drop down
- b. Select “Set” to save EDID changes

2. Copying the EDID from a specific display to a specific input:



Copy EDID from: to

- a. Select the desired Output from the dropdown, then select the desired Input from the next dropdown
- b. Click “Copy” to apply changes

The Matrix Controller software also allows you to read the EDID file from any connected display to understand what its capabilities are, you can also save it as a file for reference. You can also upload an EDID file and apply it to a specific input.

EDID data control

Read EDID data from

Save to EDID file

Open EDID file

Download EDID data to

Advanced Tab

General | Port Tag | Setting | EDID control | **Advanced** | FW upgrade

8x8 HDMI Matrix Controller - ver6.08

IR control Disable(OFF)/Enable(ON)
 OFF ON

Keys on panel Lock(OFF)/Unlock(ON)
 OFF ON

APM control OFF/ON setting
 OFF ON

Beeper Disable(OFF)/Enable(ON)
 OFF ON

TCP Module information
 Version:
 DHCP:
 IP Address:

Reset TCP Module

General | Port Tag | Setting | EDID control | **Advanced** | FW upgrade

Disconnect Connect 192.147.160.220 failed Select list item first 2014-10-13 16:59

The Advanced tab allows you to make changes on features such as disabling IR, locking the front panel, and disabling the beeping sound the Matrix unit makes when switching.

APM control

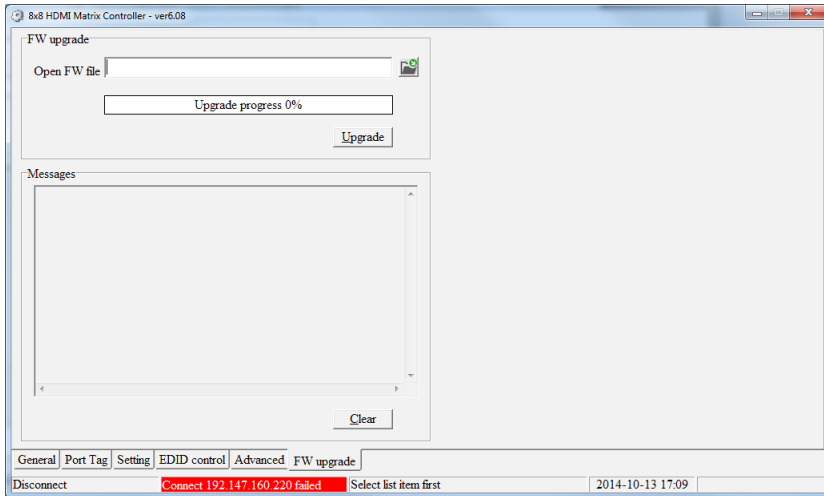
APM is short for Advanced Processing Mode, the default setting is off, this is to be used for Vanco internal testing only.

Simply click on "ON" or "OFF" for each setting.

FW Upgrade Tab

General | **Port Tag** | **Setting** | **EDID control** | **Advanced** | **FW upgrade**

This tab allows for any firmware updates we will provide on the website for these Matrix units, we will make these updates on www.vanco1.com under the "downloads" tab for each part number when available. It is important to keep your Matrix unit up to date.



Download and save the firmware onto your computer, then click on the file icon within the Matrix Controller software, and select the firmware file. Then click on "Upgrade" to begin the firmware update. Ensure that there is no disruption on the Matrix unit as this can cause issues.

NOTE: If failure occurs during the firmware update process, the following steps SHOULD be done sequentially to establish next upgrading procedure:

1. Power down the Matrix unit
2. Close the Matrix Controller software
3. Power up the Matrix unit, then wait for 10 seconds to ensure the Matrix is ready and fully booted
4. Run the Matrix Controller; open firmware file and repeat firmware update process again

Web Control

Web Control allows you to remotely control the switching of the matrix unit via your mobile phone, tablet, or any wireless device that can connect via wifi. There are some requirements to have this functionality available:

1. The matrix unit needs to be connected via the LAN port to an internet source such as a router or Ethernet switch that provides an Ethernet signal.
2. The matrix unit needs to be setup on an IP address that is available and unused, if an existing IP address is used, there will be an IP conflict and Web Control will not function. (See TCP Configuration under Software Control)

3. The device you plan to utilize (mobile phone, tablet, laptop, etc.) needs to be connected to the same network the matrix unit is connected to via wifi.

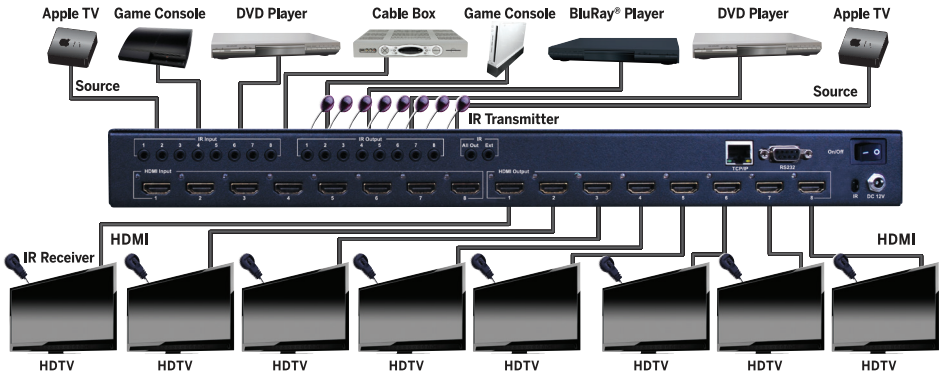
The Web Control User Interface can be accessed on your mobile phone, tablet, laptop, etc. by entering the IP address of the Matrix unit on the web browser. The IP address can also be saved as a favorite or shortcut.

For example, if the IP address on the Matrix unit was set to 192.168.1.121, simply enter this IP address on the native web browser of your mobile device, and this User Interface will display:

The screenshot shows a web browser window with a single tab titled "Dreamweaver_index.html". The page content is titled "Matrix-8x8 Web Server Demo" in blue text. Below the title, there are eight sections, each labeled "OutputX From:" where X ranges from 1 to 8. Each section contains eight radio buttons labeled "Input1" through "Input8". At the bottom of the page, there is a "Submit" button and the text "Execute Done" in red.

Simply click on any Input for each Output, then click on "Submit", this will switch the Matrix unit remotely.

CONNECT AND OPERATE



1. Connect up to 6/8 sources such as a Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to the HDMI inputs on the Matrix unit.
2. Connect the output HDMI ports, starting with output 1, to high-definition displays such as an HDTV or HD projector with HDMI inputs. Note that high-speed HDMI cables are recommended for the distances that are required for each connection.
3. For power, plug in the source first, followed by the Matrix Unit (power supply included), followed by each output display connected.

At this point each display connected should display the assigned source (input 1 at default when powered on initially), scroll through each of the sources on each display to ensure everything is in working order. Use included IR remote at each IR receiver to test switching function between sources and IR function itself. 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. If the IR remote function is not responding, check the emitters to ensure they are placed correctly and are plugged into the correct IR jacks on the Matrix Selector Switcher unit.

IR CONTROL

IR Blaster (TX)



IR Receiver (RX)



The IR system allows you to control the sources that are connected to the matrix unit, and the switching of the matrix unit itself. 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. These pigtails are placed at each display.
2. The IR Blaster (IR TX) is what sends the IR signal to your sources. These pigtails are placed at each source, either pointed at the source, or placed on the front panel of the source, see below for placement tips.

IR BLASTER

Plug IR Blasters into IR TX ports on the back of the matrix unit; place blaster in front of the IR window/eye of the corresponding source. For example, if the Blu-ray player is connected to Input #1, then route the IR blaster plugged into TX1 to the Blu-ray player.

Note: Placement of the IR Blaster is important and can result in the IR system not working if improperly placed.

- First, locate the IR eye or window on the source
- If placing the IR blaster right on the front panel of the source, do not stick right on top of the IR eye or IR window. The IR signal cannot travel through the double sided tape on the Blaster. Instead place the blaster on either side, or on the top or bottom of the IR eye or window, with the tip of the blaster facing the IR eye or window. See below for illustration of where IR signal shoots from on IR Blaster:



CORRECT IR BLASTER PLACEMENT

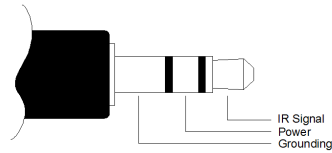


IR RECEIVER

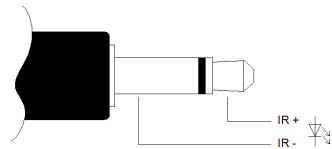
Plug IR Receiver into IR RX port of matrix unit; place receiver at or near corresponding display.

It is important to make sure the correct IR receivers and blasters are connected to the corresponding sources and displays. The Matrix unit will route IR along with the audio and video, this way you can only control what you are viewing on that output. This helps with having the same source for instance, so that you are only controlling the cable box you are watching instead of any other cable boxes connected to the matrix unit.

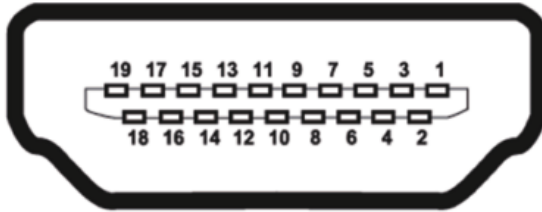
IR Receiver



IR Emitter



HDMI PIN DEFINITION >>>



Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	Pin 8	TMDS Data0 Shield	Pin 15	SCL
Pin 2	TMDS Data2 Shield	Pin 9	TMDS Data0-	Pin 16	SDA
Pin 3	TMDS Data2-	Pin 10	TMDS Clock+	Pin 17	DDC/CEC Ground
Pin 4	TMDS Data1+	Pin 11	TMDS Clock Shield	Pin 18	+5V Power
Pin 5	TMDS Data1 Shield	Pin 12	TMDS Clock-	Pin 19	Hot Plug Detect
Pin 6	TMDS Data1-	Pin 13	CEC		
Pin 7	TMDS Data0+	Pin 14	Reserved(N.C. on device)		

NOTICE

1. Vanco High Speed HDMI cables are strongly recommended for use with this product to ensure best results.
2. Incorrect placement of IR Blaster and Receiver may result in the failure of the unit. Please check carefully before plugging in the IR accessories into the respective IR sockets.
3. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input (HDMI input #1) generally can produce better transmission performance among all HDMI inputs.



Performance Guide for HDMI over Category Cable Transmission

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	***	*****	*****
	Shielded (STP)	***	***	***
Stranded	Unshielded (UTP)	*	**	**
	Shielded (STP)	*	*	**
Termination		Please use EIA/TIA-568-B termination (T568B) at any time		

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.
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 280688 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the 280688 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.

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.

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, glossary of terms, etc. please visit vanco1.com

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