HDBaseT 8x8 MATRIX

Supports 4K @ 60Hz

Vanco Part Number
EVMX4K08

HDBaseT™ 8 x 8
Matrix Selector Switch

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 EVMX4K08 4K HDBaseT 8x8 Matrix Switcher is a professional 8x8 HDBaseT Matrix Switcher that accommodates 8 HDMI inputs, 8 HDBaseT with 4 mirrored HDMI outputs, and 8-analog audio outputs, with IR and RS232 for each zone as well as IR, RS232 and IP control for the matrix.

Select any HDMI input by using either the touch-screen front panel buttons, IR, RS232, or GUI. The selected source is delivered to HDMI Output 1~4 & HDBaseT outputs 1~8. Use the HDBaseT outputs for an easy extension up to 70m at 1080p and 40m at 4Kx2K on a single CAT5e/6 connection with HDBaseT receivers (EVRXHD1) while also providing power for the receiver simultaneously. The unit also supports automatic EDID management and EQ and is HDCP 2.2 compliant.

HDBaseT™ 8 x 8 Matrix Selector Switch

Part # EVMX4K08

- 4K HDBaseT 8x8 Matrix Selector Switch that accommodates 8 HDMI inputs, 8 HDBaseT outputs with 4 mirrored HDMI outputs, and 8-analog audio outputs, with IR RS232 zone as well as IR, RS232 and IP control for the matrix
- Supports 4Kx2K @ 60Hz & 1080p 3D signals
- Transmits 4Kx2K signal for 26 ft (8m) via HDMI port and 131 ft (40m) via HDBaseT port
- Transmits 1080p signal 230 ft (70m) via HDBaseT port
- Features POC (Power over Cable) technology, providing power for the receivers - Receivers sold separately, Part # EVRXHD1
- HDCP 2.2 compatible, supports manual HDCP management and auto-detecting
- Powerful EDID management and EQ
- LCD screen shows real-time I/O connection status, switching status, HDCP status, and output resolution
- Controllable via touch-screen front panel, RS232, IR and TCP/IP
- Supports bi-directional IR & RS232 control
- Built-in GUI for TCP/IP control
- Features off memory for reliable operation - input and output mapping is automatically stored and recalled when the unit is powered on and off and in the event of a power outage
- Features a Micro USB port for Firmware upgrades
- Easy installation with rack-mounting design
- Dimensions: 17.2" W x 3.5" H x 15.3" D

PACKAGE CONTENTS

- 8x8 Matrix EVMX4K08
- (8) Wideband IR Tx cables
- (9) Wideband IR Rx cables
- IR Remote
- 2 Mounting ears with screws
- 4 Plastic cushions with screws
- 16 Pluggable Terminal Blocks
- RS232 cable
- Power Cord
- Product Manual

SPECIFICATIONS

Input	8 HDMI
Input Connector	Female HDMI
Input Level	T.M.D.S. 2.9V~3.3V
Input Impedance	100Ω (Differential)
Output	4 HDMI, 8 HDBaseT
Output Connector	Female HDMI, Female RJ45(with LED indicators)
Output Level	T.M.D.S. 2.9V~3.3V
Output Impedance	100Ω (Differential)
HDBaseT Output	1080P@60Hz ≤70m, 4Kx2K@30Hz ≤40m, 4KX2K@60Hz ≤ 40M*

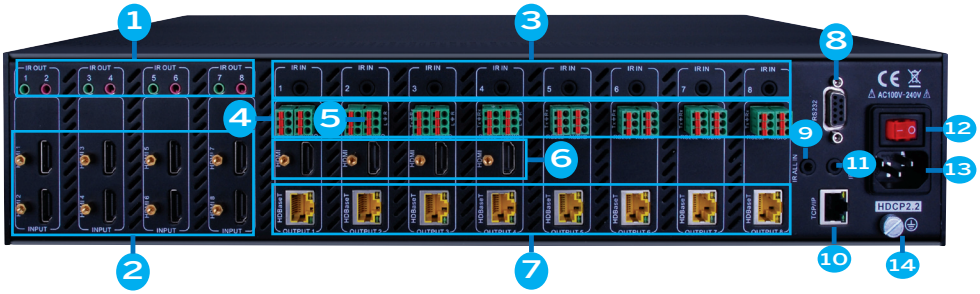
*=4KX2K@60Hz at 4:2:0 color sampling and 24 bit color

Gain	0 dB
Video Signal	HDMI (or DVI-D)
Resolution Range	Up to 4Kx2K, 1080P 3D
Bandwidth	10.2 Gbit/s
Maximum Pixel Clock	340MHz
Switching Speed	200ns (Max.)
EDID Management	In-built EDID data and manual EDID management
HDCP	Supports HDCP 2.2, auto detecting for HDCP status & selectable HDCP status
Output Signal	Analog audio
PCM Format	Distortion: 0.1% 32Ω/70mW@1KHz, 0.1% 16Ω/105mW @1KHz
Control Ports	8 IR OUT (green and red), 8 IR IN (black),1 IR EYE (black), 1 IR ALL IN (black), 1 TCP/IP (female RJ45),1 RS232 (9 pin female),8 RS232s (3-pin terminal blocks)
IR Control	In-built IR sensor, Extended IR receiver
TCP/IP Control	Works with In-built web GUI
Panel Control	Front panel touch-screen buttons
RS232 Control	9 pin female
Internal Power Supply	100V~240V AC
Power Consumption	103W (full load)
Temperature	-10 ~ +40 degree C
Reference Humidity	10% ~ 90%
Weight	5.4Kg

FRONT PANEL DESCRIPTIONS

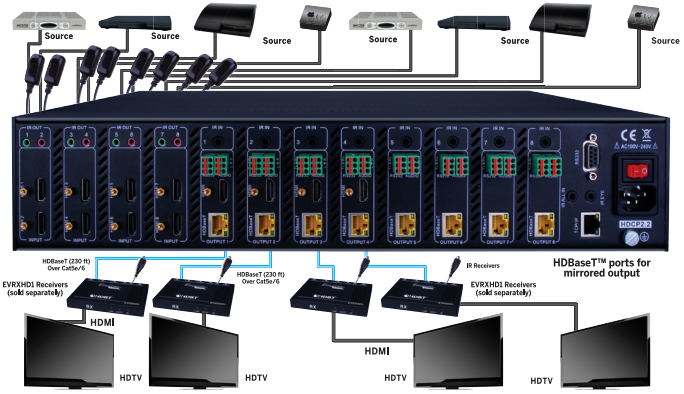
1. Firmware: Micro USB port for updating firmware
2. Power Indicator: Illuminates green when power on
3. ACT: Serial Communication
4. IR: In-built IR sensor, receive IR signals sent from IR remote.
5. LCD Screen: Display real-time operation status.
6. INPUTS/ Menu buttons: Normal mode: Back-lit buttons, ranging from “1” to “8”
7. OUTPUTS buttons/ EDID Management buttons: Normal mode: Back-lit buttons, ranging from “1” to “8”. Output 1~4 support synchronous local HDMI output. EDID mode: press and hold EDID button for 3 seconds or more to enter this mode, buttons 1~6 correspond to the 6 embedded EDID data separately.
8. ALL: Select all inputs/outputs. Example: To transfer both AV and IR signals from input to all zones. Operation: Press buttons in this order: INPUT#, ALL, ENTER.
9. EDID management button: Enable input port to manually capture and learn the EDID data of output devices. Example: Input channel No.2 captures and learns the EDID data of output channel No.4., Operation: Press buttons in this order: EDID, INPUT #, OUTPUT # ENTER.
10. CLEAR: Withdraw an operation like switching output channel, learning EDID data before it comes into effect. Meanwhile, the matrix will return to the previous status.
11. ENTER: Confirm operation. Press and hold it for 3 seconds to enter in Inquiry mode.

BACK PANEL DESCRIPTIONS



1. IR OUT: 8 in total, connect with IR emitters to deliver the IR signal sent from the far-end receivers connected to the HDBaseT ports. These IR OUT sockets make up an IR matrix with the IR IN sockets on the far-end receivers, and all can be switched simultaneously with the AV signal, or separately from switching. In default setting, the 8 IR OUT corresponds with the 8 IR IN, i.e. IR OUT1 - IR IN1, IR OUT2 - IR IN2, …IR OUT8 - IR IN8.
2. HDMI: HDMI input ports, 8 in total, type A female HDMI connector, connect with HDMI input source devices.
3. IR IN: Connect with IR receiver (with carrier), 8 in total, correspond to the 8 IR OUT, cannot be switched separately. It makes up an IR bi-directional transmission with the IR OUT on the corresponding far-end receiver.
4. RS232: 3-pin pluggable terminal blocks, 8 in total, correspond to 8 output sources separately, communicate with the RS232 port on corresponding HDBaseT receiver, and cannot be switched separately. When controlled by HDBaseT receiver, the communication protocol must be the same with the 4K HDBaseT 8x8 Matrix Switcher's.
5. AUDIO: stereo audio output ports, 8 in total
6. HDMI: Local HDMI output ports for HDMI Inputs 1~8, synchronously switched with HDBaseT Output 1~8
7. HDBaseT: output extension ports, works with HDBaseT receivers to extend signals and energize far-end HDBaseT receiver on a single CAT5e/6 cable.
8. RS232: Serial port for unit control, 9-pin female connector, connects with control device such as a PC.
9. IR ALL IN: Input port for IR control signal, connect with IR receiver (with carrier), delivers the received IR signal to all the 8 far-end receivers.
10. TCP/IP: TCP/IP port for unit control
11. IR EYE: Connect with extended IR receiver, use the IR remote to control the 4K HDBaseT 8x8 Matrix Switcher.
12. Power Trigger: Press the button to turn on/off the matrix. The indicator turns red when power on.
13. Power port: Connect to an AC 100V~240V power adapter via the included power cord
14. GROUND: Connect to grounding, make the unit ground well.

CONNECTION DIAGRAM



1. System should be installed in a clean environment and has a proper temperature and humidity.
2. All of the power switches, plugs, sockets and power cords should be insulated and safe.
3. All devices should be connected before power on.

CONNECT AND OPERATE

1. Connect HDMI sources (e.g. STB or Bluray) to the HDMI inputs of the 4K HDBaseT 8x8 Matrix Switcher with HDMI cables.
2. Connect HDBaseT receivers (e.g. HDMI Twisted Pair PoC Receiver) to the HDBaseT Output ports with twisted pair.
3. Connect HDMI displays (e.g. HDTV) to HDMI outputs of the 4K HDBaseT 8x8 Matrix Switcher or the receivers with HDMI cables
4. Connect speakers/zone amp/AV Receiver, etc. to AUDIO output ports
5. Connect the RS232 port of control device to the RS232 port of either the EVMX4K08 or far-end receivers. RS232 signal can be transmitted bi-directionally between 4K HDBaseT 8x8 Matrix Switcher and far-end receivers.
6. 4K HDBaseT 8x8 Matrix Switcher can collect IR signal sent by the included IR remote via its built-in IR sensor or through external IR receiver connected to the IR IN/ IR EYE/ IR ALL IN port. The IR signal can be transmitted bi-directionally between 4K HDBaseT 8x8 Matrix Switcher and far-end receivers.
7. Connect an AC 100V~240V power outlet and the 4K HDBaseT 8x8 Matrix Switcher with the AC power cord.

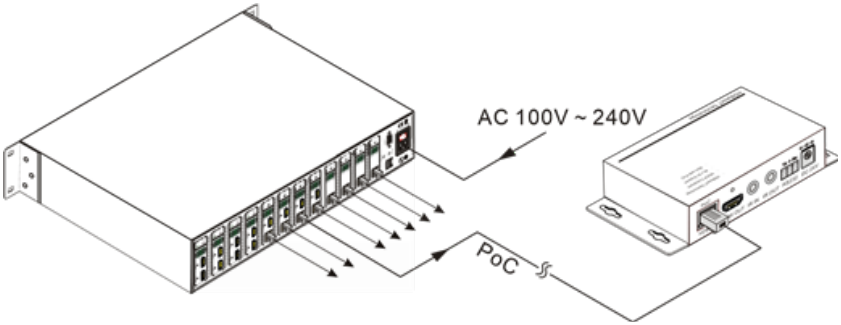
NOTICE

1. Connect HDBT ports of 4K HDBaseT 8x8 Matrix Switcher and far-end receiver with straight-through cable.

2. IR receivers connected to IR IN& IR ALL IN should be with carrier. If not, send command %0900. or %0900. to activate native carrier mode or force carrier mode in the IR matrix launched between 4K HDBaseT 8x8 Matrix Switcher and far-end receivers.

CONNECTION WITH HDBASET POH RECEIVER

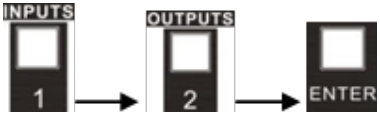
The EVMX4K08 boasts 8- HDBaseT output ports which support Poc or Power over Cable. Connect the HDBT output ports of 4K HDBaseT 8x8 Matrix Switcher to HDBaseT Receivers supporting PoH (EVRXHD1) via twisted pair. Plug a power supply to the power port of the matrix and power will be supplied to the accompanying receivers



FRONT PANEL BUTTON CONTROL

1) To convert one input to an output:

Operation: input#+ output#+ ENTER Example: input 1 to output 2



Note: In default status, 8 IR OUT sockets correspond with 8 HDMI INPUTS. When you convert an HDMI input to an output, the corresponding IR OUT will be switched synchronously.

2) To convert an input to several outputs:

Operation: input # + output # + output # +… + ENTER

Example: Switch input 2 to output 2, 4

3) To convert an input to all outputs:

Operation: input # + ALL+ ENTER

Example: Convert input 1 to all outputs

Note: Indicators of the pressed buttons will blink green for three times if the conversion is done, then it will be off. If the conversion failed, they will be off immediately.

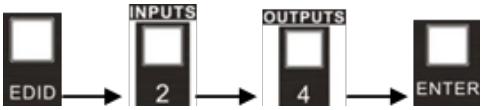
EDID

This matrix features EDID management to maintain compatibility between all devices. It can be controlled via EDID learning and EDID presets.

EDID Learning (from output):

One input port learns the EDID data of one output port

Operation: Press EDID, INPUTS #+OUTPUTS #+ENTER. Example: Input 2 learns EDID data from output 4



All input ports learn EDID data from one output port

Operation: Press EDID, ALL+OUTPUTS #+ENTER

Example: All input ports learn EDID data from output 4

Note: Indicators of the pressed buttons will blink green for three times if the conversion is done, then it will be off. If the conversion failed, they will be off immediately.

EDID Management:

There are six types of embedded EDID data. The chart below illustrates the detailed information of the embedded EDID data:

Output Button	*EDID Data*
1	1080P LPCM
2	720 LPCM
3	3840x2160 LPCM
4	1080P Dolby/Dts
5	3840x2160 Dolby/Dts
6	4096x2160 Dolby/Dts

Format: Press and hold EDID for 3 seconds, INPUT # + OUTPUT # +ENTER.

Operations:

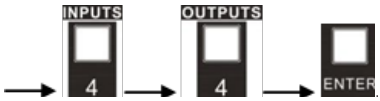
Set EDID data for one input

Operation: Press EDID (hold for 3 seconds to enter in EDID setting status),

INPUT # +OUTPUTS # +ENTER.

Example: Set the EDID data of INPUT 4 to the forth type of embedded EDID data:

Press EDID (hold for 3 seconds)



Note: If the conversion is successful, indicators of the pressed buttons will blink green for three times at normal speed; if the conversion failed, they will blink for three times quickly.

Output check

Press any output button to check its corresponding input.

Example: Check which one is the corresponding input for output 2. (Presume Output 2 corresponds to Input 1.)

Operation: Press Output 2 button, LCD screen display AV: 1->2 IR: 1->2, and indicators of input 1 and output 2 turn on and last for 3 seconds. Then output 2 corresponds to input 1.

Clear operation

When you switch output channel, learn EDID data, or set EDID data, press Clear button to withdraw the operation before you press ENTER to carry it on. When you press it, the matrix will return to the previous status.

IR Control

By using IR & HDBaseT transmission technology, the matrix has some additional functions as follows:

1) Control far-end output device from local.

2) Control local input/output device remotely.

3) Control the 4K HDBaseT 8x8 Matrix Switcher locally/remotely.

REMOTE CONTROL

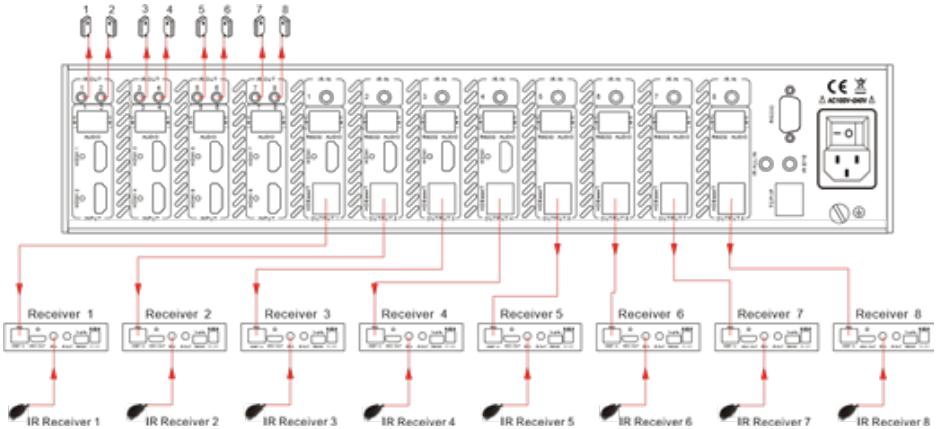
1. Standby button, press it to enter/ exit standby mode
2. Input channels, range from 1~8, corresponding IR signal switched synchronously when switching input channels.
3. Menu buttons, ALL, EDID and CLEAR, same with the corresponding front panel buttons. Please refer to 4.1 Front Panel Button Control for details.
4. Navigation buttons, ENTER: Confirm button.
5. Output channels, range from 1~8. Each channel has 1 IR IN, 1 HDBaseT, 1 RS232, and 1 AUDIO outputs, and channel 1~4 have HDMI outputs.

Note: With this IR remote, the matrix can be controlled with the built-in IR sensor, the extended IR receiver connected to the IR EYE/ IR ALL IN, or through the IR receiver on the far-end receiver.

IR CONTROL

IR Matrix Switching

The 8 IR OUT ports and the 8 IR IN ports on the far-end receivers make up an 8x8 IR matrix. See as below:



IR Matrix Switching

The 8 IR OUT ports and the 8 IR IN ports on the far-end receivers make up an 8x8 IR matrix. See as below:

IR Matrix

The IR signal is sent by corresponding IR remote, then it is transferred to HDBaseT receiver and on to the corresponding zone of the matrix through the twisted pair where finally it is transferred to the IR OUT port and received by controlled device.

Switching Operation: 8 IR IN ports correspond with 8 HDMI input ports separately in default mode.

a) Sending command (reference RS232 Control): (x1)R(x2).

x1: Corresponding to the 8 IR OUT ports of the matrix, the IR transmitter connected to this port can be placed at IR receiving area of output device or 4K HDBaseT 8x8 Matrix Switcher itself. x2: Corresponding to the zone (receive IR signal from HDBaseT receiver with IR IN port connects with IR receiver) number of 4K HDBaseT 8x8 Matrix Switcher.

Example: Send command - 3R2.II to transfer IR signal received from zone 2 to IR OUT port 3.

2) Force Carrier

a) Only if the IR receiver connected to HDBaseT receiver is with IR carrier, can the received IR signal be transferred to IR OUT port of the matrix.

b) Only if the IR receiver connected to IR ALL IN port of the matrix is with IR carrier, can the received IR signal be transferred to IR OUT port of the matrix.

If the IR receiver connected with HDBaseT receiver or IR ALL IN port of the matrix is not with IR carrier, send the command %0901 to enter infrared carrier enforcing mode, and then IR signal can be transferred to IR OUT port.

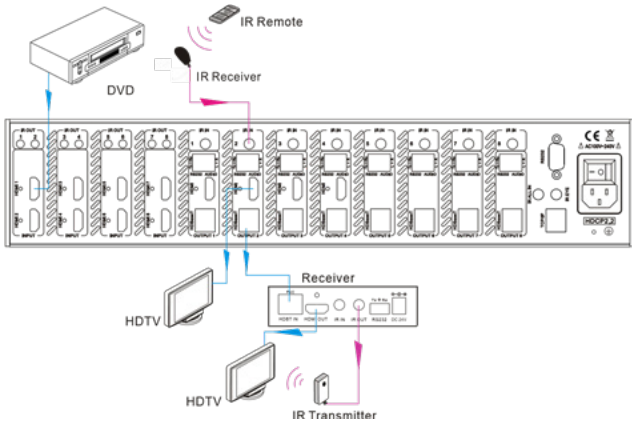
3) IR control setting

Control far-end output device from local

Connect an IR receiver with IR carrier to the IR IN port of 4K HDBaseT 8x8 Matrix Switcher, users can control far-end output displayer via its IR remote from local.

In that case, the IR signal is transferred via twisted pair. Only the corresponding IR OUT port can emit control signals to the remote display.

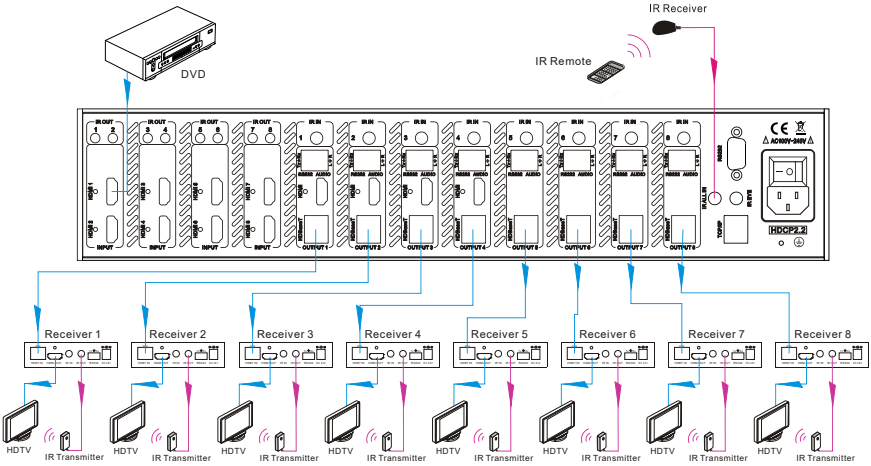
See the figure below:



Control far-end device from Local

Note: The IR receiver connected to IR IN must be with IR carrier

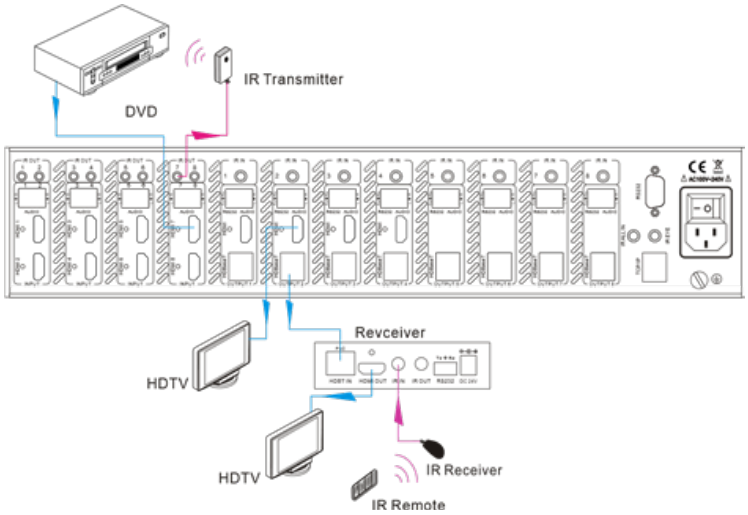
The IR signal received from IR ALL IN port will be transmitted to all the eight far-end HDBaseT receivers connected to HDBaseT ports of the 4K HDBaseT 8x8 Matrix Switcher. See as below:



Control far-end device through IR ALL IN port

Control local device from remote

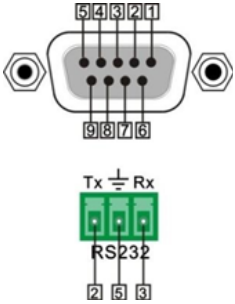
User can control local source devices with their IR remote from remote too. When using, the IR signal received by the HDBaseT receiver will be transmitted to the corresponding IR OUT port of the 4K HDBaseT 8x8 Matrix Switcher. See below:



RS232 CONTROL

Connection with RS232 Communication Port

Except the front control panel, the 4K HDBaseT 8x8 Matrix Switcher can be controlled by far-end control system through the RS232 communication port. This RS232 communication port is a female 9-pin D connector. The definition of its pins is listed in the table below.



1	N/u	Unused
2	TX	Transmit
3	Rx	Receive
4	N/u	Unused
5	Gnd	Ground
6	N/u	Unused
7	N/u	Unused
8	N/u	Unused
9	N/u	Unused

Installation/uninstallation of RS232 Control Software

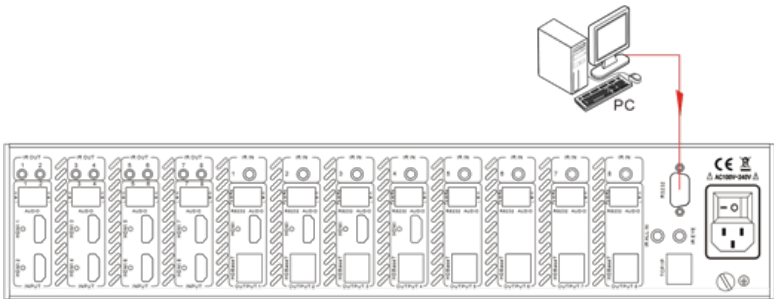
Installation Copy the control software file to the computer connected with 4K HDBaseT 8x8 Matrix Switcher.

Uninstallation Delete all the control software files in corresponding file path.

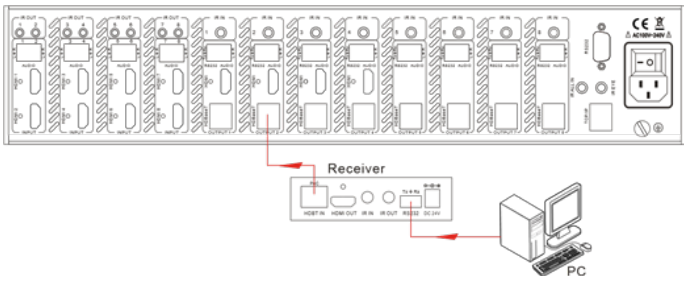
RS232 Control Modes

To control the 4K HDBaseT 8x8 Matrix Switcher, you need to connect its 9 pin female RS232 port to a PC's RS232 port, or you can just connect any one of the HDBaseT receiver's RS232 port with PC (RS232 command can be transmitted to the 4K HDBaseT 8x8 Matrix Switcher via the twisted pair). By using RS232 control software and with right specification settings, you are able to control the 4K HDBaseT 8x8 Matrix Switcher.

Control the 4K HDBaseT 8x8 Matrix Switcher locally:

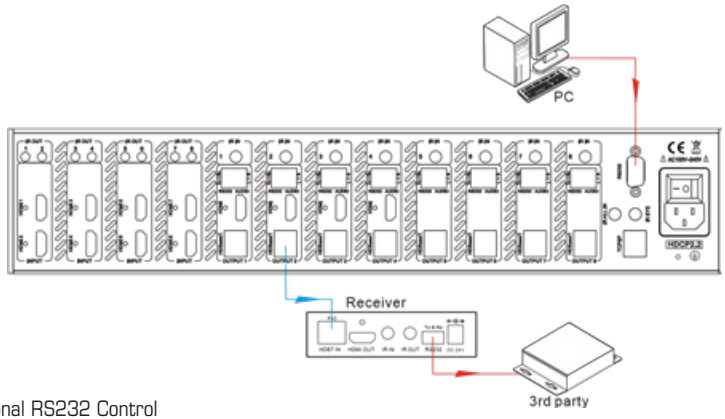


Control the 4K HDBaseT 8x8 Matrix Switcher from remote location:



Control 3rd-Party Device from Local

Connect the 9 pin female RS232 port of the 4K HDBaseT 8x8 Matrix Switcher with PC, by using the RS232 command -/+[Y]/[X]:******.II, you are able to control the 3rd-party device connected with the HDBaseT receiver

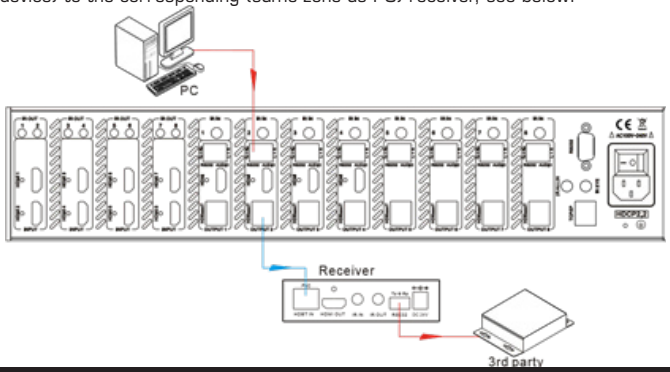


Bi-directional RS232 Control

By connecting one RS232 port with PC (or controlled device), and connecting the RS232 port of corresponding HDBaseT receiver with controlled device (or PC), the RS232 signal is able to be transmitted bi-directionally.

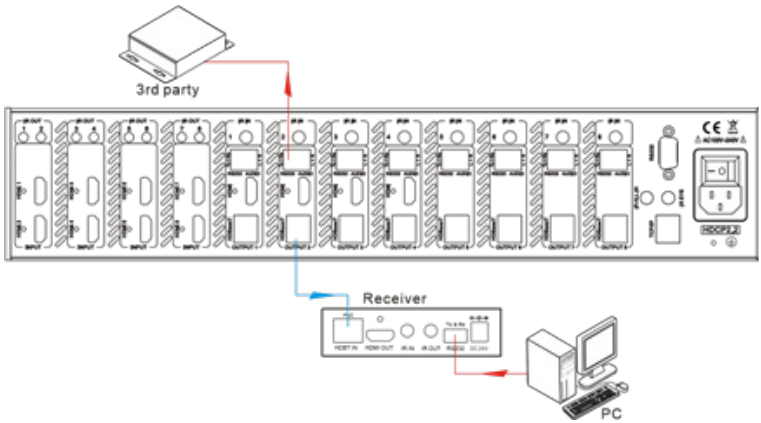
Control far-end device from local

Connect the RS232 (3-pin pluggable terminal block) port in any zone to PC, and connect the controlled RS232 device (3rd party device) to the corresponding (same zone as PC) receiver, see below:



Control the 4K HDBaseT 8x8 Matrix Switcher from remote

Connect the RS232 (3-pin pluggable terminal block) port in any zone to controlled device (3rd party device), and connect PC to the corresponding (same zone as controlled device) receiver, see below:



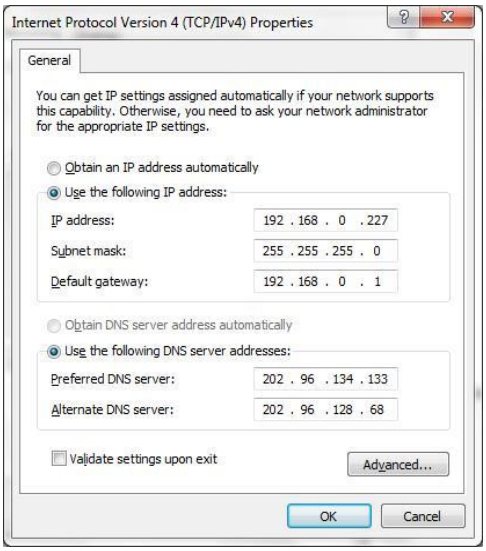
TCP/IP CONTROL

Control Modes

TCP/IP default settings: IP is 192.168.0.178, Gateway is 192.168.0.1, and Serial Port is 4001. IP & Gateway can be changed as you need, Serial Port cannot be changed.

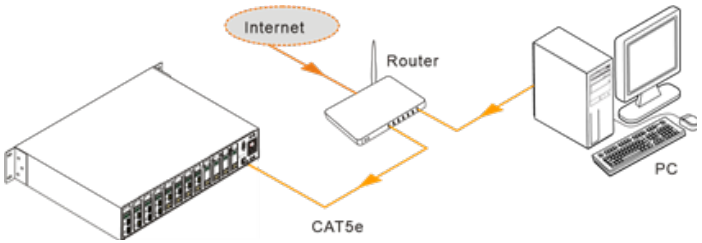
Controlled by Single PC

Connect a computer to the TCP/IP port of the 4K HDBaseT 8x8 Matrix Switcher, and set its network segment to the same as the 4K HDBaseT 8x8 Matrix Switcher's.



Controlled by PC(s) in LAN

Connect 4K HDBaseT 8x8 Matrix Switcher, a router and several PCs to setup a LAN (as shown in the following figure). Set the network segment of 4K HDBaseT 8x8 Matrix Switcher to the same as the router's, then PCs within the LAN are able to control 4K HDBaseT 8x8 Matrix Switcher.



Follow these steps to connect the devices:

Step1. Connect the TCP/IP port of the 4K HDBaseT 8x8 Matrix Switcher to Ethernet port of PC with twisted pair.

Step2. Set the PC's network segment to the same as the 4K HDBaseT 8x8 Matrix Switcher's. Do please remember the PC's original network segment.

Step3. Set the 4K HDBaseT 8x8 Matrix Switcher's network segment to the same as the router.

Step4. Set the PC's network segment to the original ones.

Step5. Connect the 4K HDBaseT 8x8 Matrix Switcher and PC(s) to the router. PC(s) within the LAN is able to control the 4K HDBaseT 8x8 Matrix Switcher asynchronously.

Then it's able to control the device via GUI.

GUI for TCP/IP control

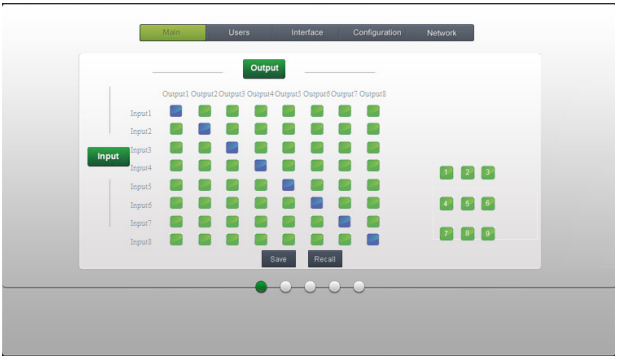
4K HDBaseT 8x8 Matrix Switcher provides with built-in GUI for convenient TCP/IP control. GUI allows users to interact with 4K HDBaseT 8x8 Matrix Switcher through graphical icons and visual indicators.

Type 192.168.0.178 in your browser, it will enter the log-in interface shown as below:

There are 2 selectable usernames – admin (default password: admin) and user (default password: user). Log in as admin can access more configuration interfaces than user.

Enter username and the right password. See next page for a brief introduction to the interfaces.

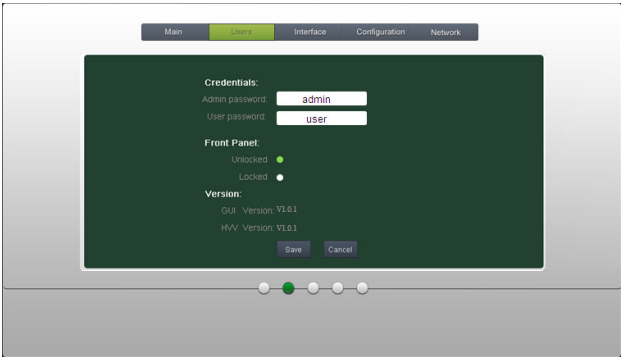
Main: Interface shown after logging in, provide intuitive I/O connection switching. See the screenshot below:



The button matrix displays every possible connection between every input and output, users can carry on the connections by clicking corresponding button.

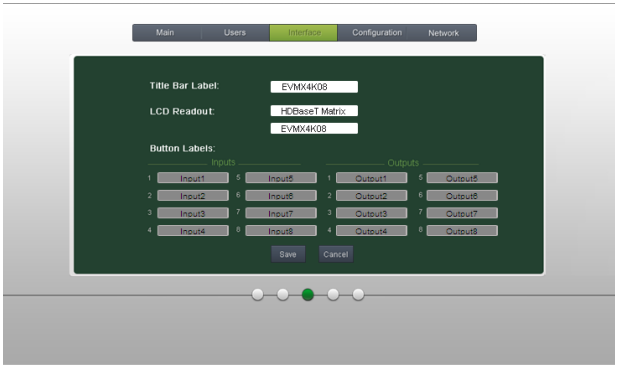
Buttons 1~9 at the right-bottom corner provides quick saving and recall for overall connection status.

Users: Display or modify credential settings, front panel lock, and GUI version.

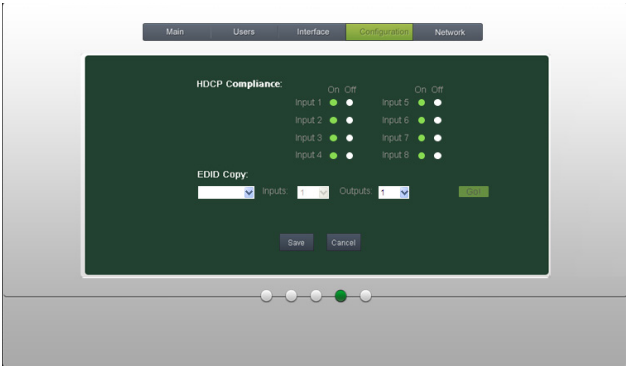


If there is any modification, press Save to restore the settings, or press Cancel to withdraw.

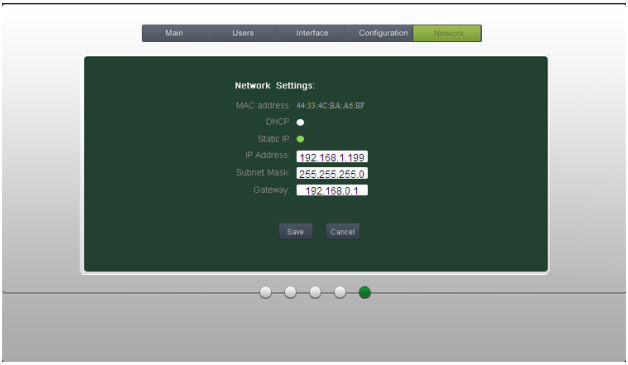
Interface: Set title bar label, LCD readout, and button labels, press Save to save the settings



Configuration: Set HDCP Compliance status for every input, and manage EDID. See the screenshot below. Note with HDCP compliant sources, HDCP NEEDS TO BE SET TO ON.



Network: Inquire and configure network settings including MAC address, IP address, subnet mask, and Gateway



Note: Log in as user access main interface only.

TROUBLE-SHOOTING

1. PROBLEM: Color loss or no video signal output. CAUSE: The connecting cables may not be connected correctly or it may be broken. SOLUTION: Check whether the cables are connected correctly and in working condition.
2. PROBLEM: No output image when switching. CAUSE: No signal at the input / output end. Solution: Check with oscilloscope or multi-meter if there is any signal at the input/ output end.
3. PROBLEM: No output image when switching. CAUSE: Input source is with HDCP while the HDCP compliance is switched off SOLUTION: Send command /%[Y]/[X]:1 or change HDCP compliance status in GUI.
4. PROBLEM: No output image when switching. CAUSE: The display doesn't support the input resolution. SOLUTION: Switch for another input source or enable the display to learn the EDID data of the input.
5. PROBLEM: Cannot control the device via front panel buttons. CAUSE: Front panel buttons are locked. SOLUTION: Send command /%Unlock; or select unlock in GUI interface to unlock
6. PROBLEM: Cannot control the device via IR remote. CAUSE: The battery has run off. SOLUTION: Change for new battery.
7. PROBLEM: Cannot control the device via IR remote CAUSE: The IR remote is broken. SOLUTION: Send it to authorized distributor for repairing.
8. PROBLEM: Cannot control the device via IR remote. CAUSE: Beyond the effective range of the IR signal or not pointing at the IR receiver. SOLUTION: Adjust the distance and angle and point right at the IR receiver.
9. PROBLEM: Cannot control the device via IR remote. CAUSE: The IR receiver connected to IR IN/ IR ALL IN port is not with carrier. SOLUTION: Change for an IR receiver with carrier.
10. PROBLEM: Power Indicator remains off when powered on. CAUSE: Failure in power connection. SOLUTION: Check whether the cables are connected correctly
11. PROBLEM: EDID management does not work normally. CAUSE: The HDMI cable is broken at the output end. SOLUTION: Change for another HDMI cable which is in good working condition.
12. PROBLEM: There is a blank screen on the display when switching CAUSE: The display does not support the resolution of the video source. SOLUTION: Try Switching again, or Manage the EDID data manually to make the resolution of the video source automatically compliant with the output resolution.
13. PROBLEM: Cannot control the device by control device (e.g. a PC) through RS232 port. CAUSE: Wrong connection. SOLUTION: Check to ensure the connection between the control device and the unit
14. PROBLEM: Cannot control the device by control device (e.g. a PC) through RS232 port. CAUSE: Wrong RS232 communication parameters. SOLUTION: Type in correct RS232 communication parameters: Baud rate:9600; Data bit: 8; Stop bit: 1; Parity bit: none
15. PROBLEM: Cannot control the device by control device (e.g. a PC) through RS232 port. CAUSE: Broken RS232 port. SOLUTION: Send it to authorized distributor for replacement
16. PROBLEM: Static becomes stronger when connecting the video connectors. CAUSE: Bad grounding SOLUTION: Check the grounding and make sure it is connected well.
17. PROBLEM: Cannot control the device by RS232 / IR remote / front panel buttons. CAUSE: The device is not operating properly. SOLUTION: Send it to authorized distributor for replacement.

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

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

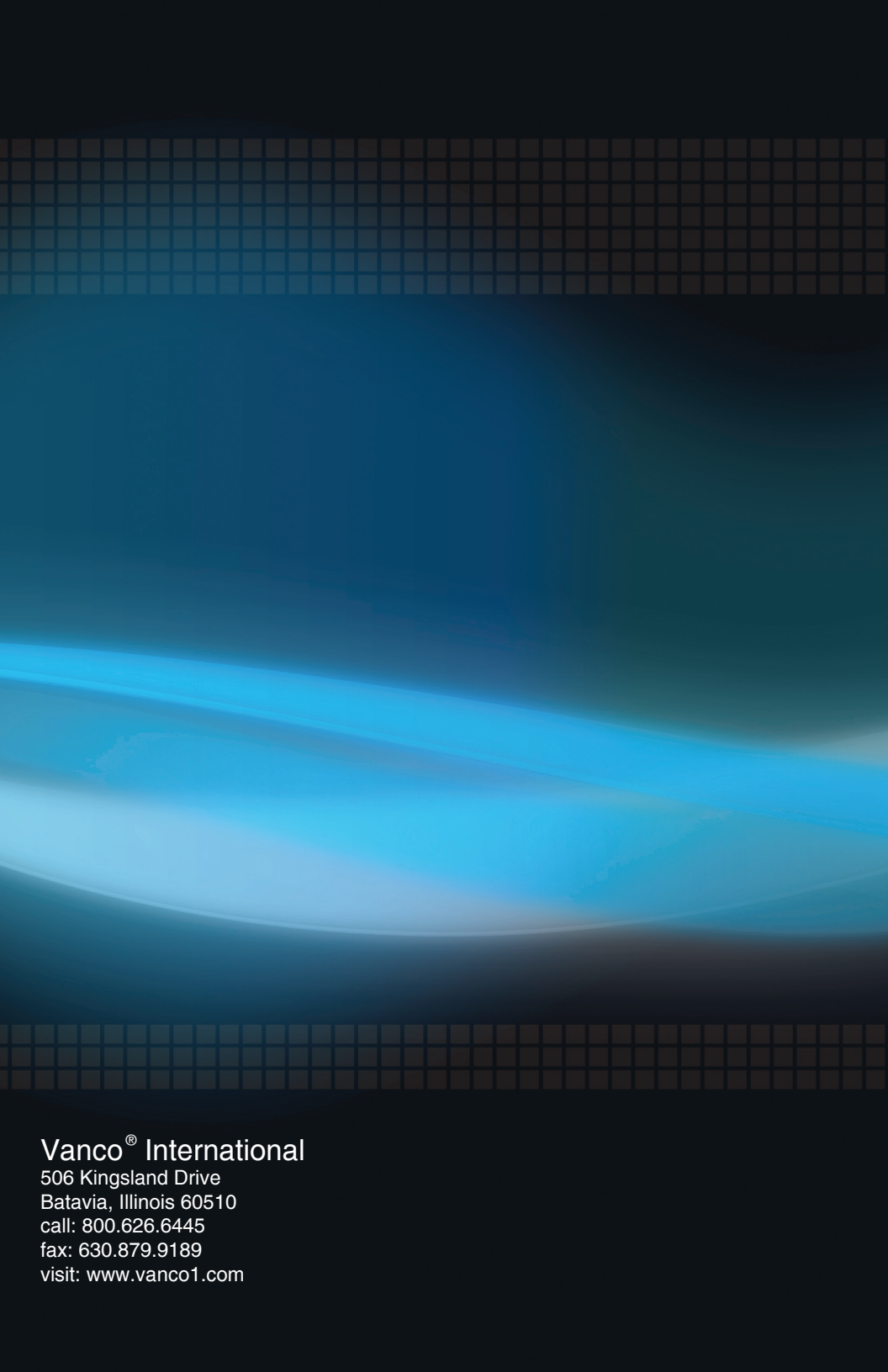
Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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.



Vanco® International
506 Kingsland Drive
Batavia, Illinois 60510
call: 800.626.6445
fax: 630.879.9189
visit: www.vanco1.com