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4x4 HDBaseT Matrix Kit 4K
User's Guide

P/N:Matrix44-HDBT

G4-0064A

Thank you for purchasing from gofanco. Our products aim to meet all your connectivity needs wherever you go. For optimum performance and safety, please read the instructions carefully and keep this User's Guide for future reference. If you need more information about our products, please visit www.gofanco.com. For technical support, email us at support@gofanco.com. For drivers or manual download, please go to www.gofanco.com/download.

Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not put any items into the device or attempt to modify its operation
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables and IR cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included power adapter only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The 4x4 HDBaseT Matrix Kit 4K allows you to select and switch between any of the 4 HDMI source devices to display on any of the 3 HDBaseT outputs and one HDMI output.

Features

- Transmits HDMI signals in 1080p up to 70 meters and 4K signals up to 40 meters over high quality CAT cable via HDBaseT technology
- Local HDMI port transmits 4K signals up to 8 meters via HDMI cable for additional HDMI extension
- Supports Power over Cable (PoC) technology, allowing the HDBaseT receivers to be powered by the Matrix Switcher over CAT cables
- Supports bidirectional IR remote control to control the source device or display device from long distances
- Smart EDID management allows you to select the output resolution to match the connected displays
- Compliant with HDMI 1.4 and HDCP 2.2 specifications

Installation Requirements

- HDMI source device (DVD player, set top box, PC, etc.)
- HDMI display device (SDTV/Monitor, HDTV/ Monitor, projector, etc.)
- HDMI cables (not included)
- CAT cables (not included)

Package Contents

4x4 HDBaseT Matrix Switcher

- 1x 4x4 HDBaseT Matrix Switcher
- 2x Mounting ears with 6 screws
- 4x Plastic pads
- 1x IR remote control
- 4x IR receiver cables
- 4x IR emitter cables
- 1x RS232 cable (Phoenix to 9-pin D-Sub)
- 1x Power adapter (24VDC/2.71A)
- 1x User manual

HDBaseT Receiver

- 3x HDBaseT Receivers
- 6x Mounting ears with 6 screws
- 12x Plastic pads

Product Layout

HDBaseT Matrix Switcher

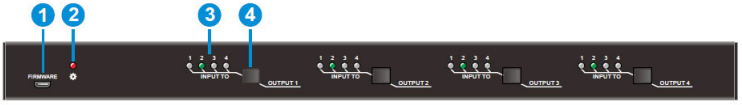


Figure 1: HDBaseT Matrix Switcher Front Panel Layout

No.	Name	Description
①	FIRMWARE	Micro USB port for updating firmware
②	Power Indicator	➢ **OFF**: No power; ➢ **RED:** DC power present or Standby Mode
③	INPUT selector Indicators	Total 4 groups, and each group is set up including 4 green indicators for 4 input sources, numbered from "1" to "4".
④	Output selector button	Total 4 output selector buttons, press the buttons to switch input cycle for the output.

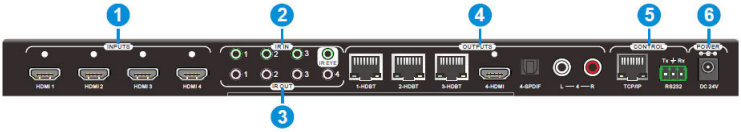


Figure 2: HDBaseT Matrix Switcher Rear Panel Layout

No.	Name	Description
①	HDMI INPUTS	4 x HDMI input ports, type A female HDMI connector, connect the Source with an HDMI cable to any of the HDMI inputs.
②	IR IN	➢ 3 x IR IN: Connect with IR receiver, fixed IR input for the output, cannot be switched separately. It makes up an IR bi-directional transmission with the IR OUT on the corresponding HDBaseT receiver. ➢ 1 x IR EYE: Connect with extended IR receiver, use the IR remote to control the Matrix Switcher.
③	IR OUT(1~4)	Plug in the IR Emitter and attach to the front of the Source. This then emits the IR signal received from the HDBaseT Receiver.
④	OUTPUTS	➢ **HDBaseT:** The HDBT RJ45 outputs deliver HD video, Audio and PoC to the HDBaseT Receiver up to 70m. ➢ **HDMI:** Connect an HDMI cable from the Matrix Switcher to the displayer. ➢ **SPDIF:** Digital audio output connects directly via an optic fibre cable to the Toslink input on a sound bar. ➢ **RCA (L&R):** PCM Analogue audio output sockets connect the de-embedded audio additional speakers.
⑤	Control	➢ **TCP/IP:** RJ45 port. Connect with PC for Web-based GUI control. ➢ **RS232:** Serial port for unit control, 3-pin pluggable terminal block, connects with control device (e.g. PC).
⑥	DC 24V	Connect with DC24V 2.71A power adaptor.

HDBaseT Receiver

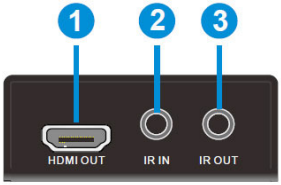


Figure 3: HDBaseT Receiver Front Panel Layout

No.	Name	Description
①	HDMI OUT	Connect to HDMI display.
②	IR IN	Plug in the IR receiver, this will receive the IR signals from the RCU and send through to the Matrix Switcher and then control the desired source.
③	IR OUT	Plug in the IR emitter and attached to the front of the display, this will send the IR signals form the Matrix Switcher to control the display which is connected to the HDMI OUT port.

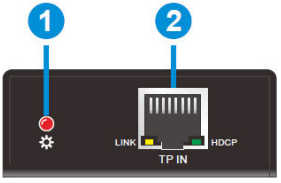


Figure 4: HDBaseT Receiver Rear Panel Layout

No.	Name	Description
①	Power Indicator	➢ **OFF**: No power; ➢ **RED:** DC power present (PoC).
②	TP IN	The RJ45 socket has two LED status indicators. Plug in the Pre-installed CAT cable in to the HDBT RJ45 socket. ➢ **HDCP**: HDCP compliant indicator ✧ OFF: No HDMI traffic (no picture) ✧ GREEN: Signals with HDCP. ✧ Blinking GREEN: Signal without HDCP ➢ **LINK**: HDBT Link status indicator. ✧ OFF: No Link ✧ YELLOW:Link Successful ✧ Blinking YELLOW: Link Error

Hardware Installation

1. Power off all devices including your HDMI source(s) and HDMI display(s).
2. Connect your HDMI source device(s) to the HDBaseT Matrix Switcher's HDMI Input connector with an HDMI cable (HDMI cable not included).
3. Connect your CAT cable between the HDBaseT Matrix Switcher and HDBaseT Receivers.
4. Optional: Connect an HDMI display to the HDMI output of the HDBaseT Matrix Switcher using an HDMI cable (HDMI cable not included).
5. Connect your HDMI display to the HDBaseT Receiver's HDMI Output port with an HDMI cable.
6. Optional: Connect the IR Receiver cable and the IR emitter cable to the IR interface port. This connection is needed only if you need to control your HDMI devices from the remote location. See IR Control, on page 9 for proper IR connection.
7. Optional: Connect an AVR amplifier to the S/PDIF or Toslink output port.
8. Optional: Connect speakers to the matrix switcher's L&R output port via RCA cable.
9. Optional: Connect the included RS232 cable between the matrix switcher's RS232 socket and your PC's serial port or a CAT cable between the matrix switcher's ethernet port and router or PC's ethernet port . This connection is needed only if matrix device control using a PC is requred.
11. Plug the included power adapter into the matrix switcher's Power Jack, then plug the power adapter into a reliable power outlet.
12. Power on all connected devices. The Matrix Switcher is ready for use.

Application Diagram

The application diagram shows the most typical input and output devices used with the 4x4 HDBaseT Matrix Kit 4K.

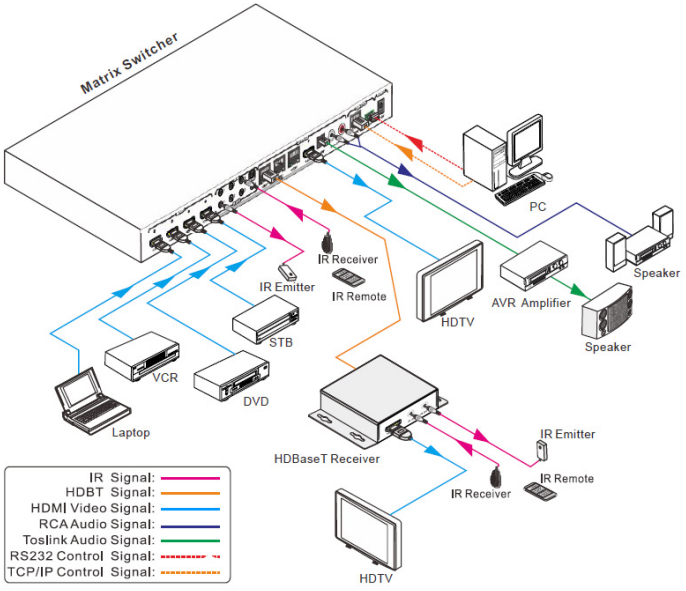


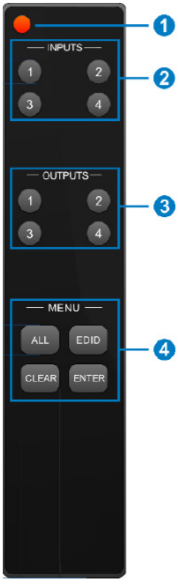
Figure 5: Application Diagram

IR Control

Provides IR control of the connected devices. The IR feature is bidirectional so either the source device or the display device(s) can be remotely controlled.

IR Remote

Users can control the Matrix Switcher using the included remote. Connect an IR receiver cable to the IR Eye of the Matrix Switcher.



① Standby button, press it to enter/ exit standby mode.

② INPUTS:
Input channel selection buttons, range from 1~4, corresponding IR signal switched synchronously when switching input channels.

③ OUTPUTS:
Output channel selection buttons.

④ Menu buttons: ALL, EDID, CLEAR and ENTER.

- **ALL**: Select all outputs.
- **EDID** management button: Enable input port to manually capture and learn the EDID data of output devices.
- **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.
- **ENTER:** Confirm operation.

Figure 6: IR Remote Layout

Controlling the Matrix Switcher

1) **To convert one input to an output:**

   Example: Input 1 to Output 3

   → Press INPUTS 1 + OUTPUTS 3 + ENTER

> **NOTE:**
>
> Default status, on first boot up this matrix assigns the IR outputs to the corresponding HDMI input, meaning, IR out 1 is directly associated to HDMI input 1 and so on. When you switch an HDMI input to a different output, the corresponding IR OUT will be switched synchronously to allow the IR commands to be sent from the select zone back through the Matrix Switcher to the source.

2) **To convert an input to several outputs:**

   Example: Convert Input 2 to Output 3 and 4

   → Press INPUTS 2 + OUTPUTS 3 + OUTPUTS 4 + ENTER

3) **To convert an input to all outputs:**

   Example: Input 1 to all Outputs

   → Press INPUTS 1 + ALL + ENTER

By using IR & HDBaseT transmission technology, the HDMI HDBaseT 4x4 4K Matrix Kit has the functions as follows:

1) Control far-end output device from local.
2) Control local input/output device remotely.
3) Control the Matrix Switcher locally/remotely.

4.1.2 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 Switcher.

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

If the IR receiver connected to HDBaseT receiver or the Matrix Switcher is without an IR carrier signal, send the command "%0901." to enter infrared carrier enforcing mode, and then IR signal can be transferred to IR OUT port.

Controlling the Display Device(s)

1. Connect an IR Receiver cable to the IR In port of the HDBaseT Splitter.
2. Connect an IR Emitter cable to the IR Out port on each HDBaseT Receiver.
3. Point the IR Emitter cable's IR eye in line with the IR receiver on the display device.

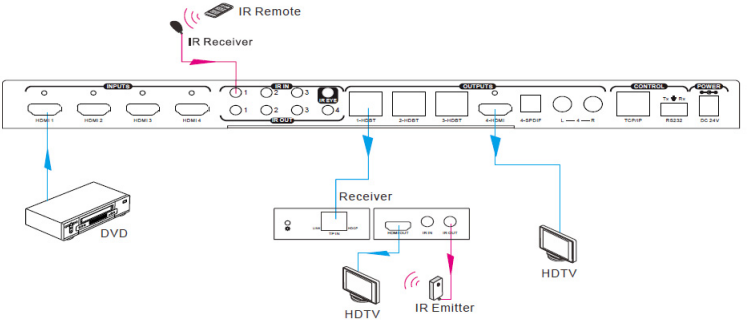


Figure 7: Display Device IR Control Connection Diagram

Controlling the Source Device

1. Connect an IR Emitter cable to the IR Out port of the Matrix Switcher.
2. Point the IR Emitter cable's IR eye in line with the IR receiver on the source device.
3. Connect an IR Receiver cable to the IR In port on each HDBaseT Receiver.

Single Source Device IR Control

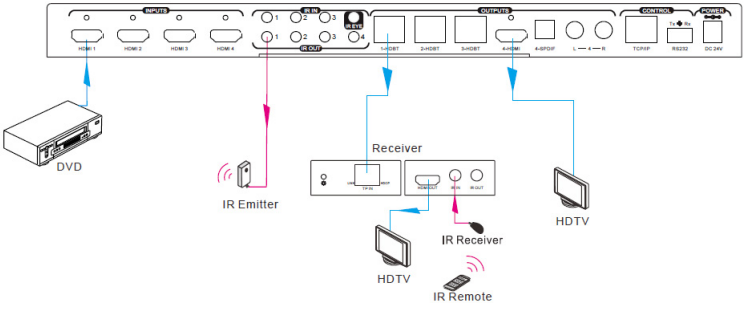


Figure 8: Single Source Device IR Control Connection Diagram

Multiple to Multiple Device IR Control (Matrix)

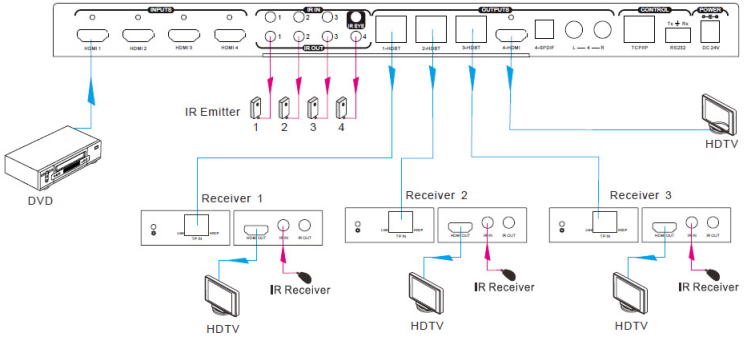


Figure 9: Multiple to Multiple Device IR Control Connection Diagram

RS232 Control

Connect the control PC's RS232 serial port to the Matrix Switch's RS232 port using the included RS232 cable.

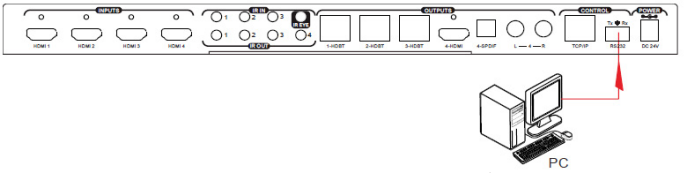


Figure 10: RS232 Control

RS232 Control Software

Works with most serial command and monitoring software such as CommWatch.

- Download CommWatch or the serial command software of your choice
- Installation: Copy the control software files and paste them to the hard drive of your PC
- Uninstallation: Delete all control software files from the PC

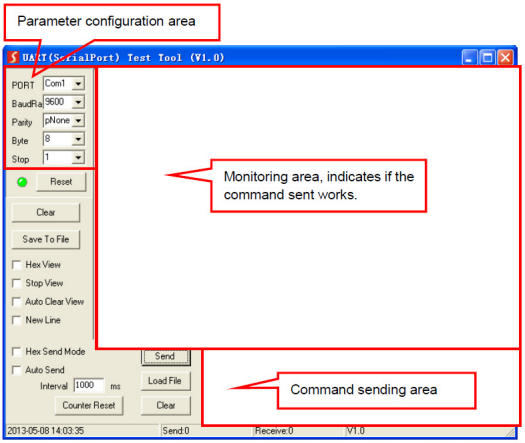
Basic Settings

1. Connect all input and output devices as needed, then connect the PC to the Matrix Switcher.
2. Double click the software icon to run the control software. The icon is shown below.

The examples shown on this page and the following page are from CommWatch serial command software.

Control Software Interface

Set the COM port, Baud rate, data bit, stop bit, and parity. Enter commands into the Command Sending Area.



RS232 Commands

Default settings: Baud rate: 9600, Data bit: 8, Stop bit: 1, Parity bit: none.

RS232 Commands

Command	Function	Feedback Example
System Commands		
/*Type;	Inquire the models information.	XXXXX
/%Lock;	Lock the front panel buttons on the Matrix.	System Locked!
/%Unlock;	Unlock the front panel buttons on the Matrix.	System Unlock!
/^Version;	Inquire the version of firmware	VX.X.X
Demo.	Switch to the "demo" mode, convert input and output in turn like1B1, 1B2, …4B3, 4B4, 1B1… and so on .The switching interval is 2 seconds.	Demo Mode AV:01->01 IR:01->01 AV:01->02 IR:01->02 …… AV:04->04 IR:04->04 ……
Operation Commands		
[x]All.	Transfer signals from the input channel [x] to all output channels	X To All. (X=01~04)
All#.	Transfer all input signals to the corresponding output channels respectively like 1->1, 2->2…	All Through.
All$.	Switch off all the output channels.	All Closed.
[x]#.	Transfer signals from the input channel [x] to the output channel [x].	X Through. (X=01~04)
[x]$.	Switch off the output channel [x].	X Closed. (X=01~04)
[x]@.	Switch on the output channel [x].	X Open. (X=01~04)
All@.	Switch on all output channels.	All Open.
[x1]V[x2].	Transfer the AV signal from the input channel [x1] to one or several output channels ([x2], separate output channels with comma).	AV: X1-> X2 (X1/X2=01~04)
[x1]B[x2].	Transfer the AV and IR signal from input channel [x1] to one or several output channels ([x2], separate output channels	AV: X1-> X2 (X1/X2=01~04)

RS232 Commands

Command	Function	Feedback Example
	with comma).	
[x1] R[x2].	Transfer the IR signal from output [x1] to input [x2].	IR: X1-> X2(X1、X2=01~04)
Status[x].	Check the I/O connection status of output [x]	AV: Y-> X (X=01~04, Y=01~04)
Status.	Inquire the input channel to the output channels one by one.	AV: 01->01 ... ... AV: 04->04 IR: 01->01 ... ... IR: 04->04
Save[Y].	Save the present operation to the preset command [Y], ranges from 0 to 9.	Save To FY (Y=0-9)
Recall[Y].	Recall the preset command [Y].	Recall From FY (Y=0-9)
Clear[Y].	Clear the preset command [Y].	Clear FY (Y=0-9)
PWON.	Work in normal mode.	PWON
PWOFF.	Enter into standby mode and cut off the power supply to HDBaseT receivers.	PWOFF
STANDBY.	Enter into standby mode. (Do not cut off the power supply to HDBaseT receivers, press other buttons or send other commands to start.)	STANDBY
/%[Y]/[X]:[Z].	HDCP management command. [Y] is for input (value: I) or output (value: O); [X] is the number of the port, if the value of X is ALL, it means all ports; [Z] is for HDCP compliant status, the value may be 1 (HDCP compliant) or 0 (not HDCP compliant).	/%[Y]/[X]:[Z].
DigitAudioON[x].	Enable HDMI audio output of port x. ● X=1, 2, 3, 4, enable this port. ● X=5, enable all the 4 ports.	DigitAudio ON with [x]
DigitAudioOFF[x].	Disable HDMI audio output of port x. ● X=1, 2, 3, 4, disable this port. ● X=5, disable all the 4 ports.	DigitAudio OFF with [x]
/+[Y]/[X]:******.	Set communication between PC and HDBaseT receiver.	******

RS232 Commands

Command	Function	Feedback Example
	① Y is for RS232 port (connect with RS232 port of HDBaseT receiver) Y= 1~5 or A~H, The value of Y is defined into the following meanings (in a given baud rate depended by the value of X): **a.** Y = 1~4, send this command to the corresponding HDBaseT receiver to control far-end device. **b.** Y = 5, send this command to all HDBaseT receivers to control all far-end devices. **c.** Y = A, B, C, or D **d.** Y = E, F, G, or H For items c or d, send this command, it will be saved to the matrix switcher but taken without action to corresponding HDBaseT receiver. And its command function will be effective almost at the same time when you send the command PWON (for item c) or PWOFF (for item d). Note: A & E are for port 1. B & F are for port 2. C & G are for port 3. D & H are for port 4. ② X is for baud rate, its value ranges from 1 to 7 (1--2400, 2--4800, 3--9600, 4--19200, 5--38400, 6—57600, 7--115200) ③ ***** is for data (max 48 Byte)	
EDIDH[x]B[y].	Input port [y] learns the EDID from output port [x]. If the EDID data is available and the audio part supports not only PCM mode, then force-set it to support PCM mode only. If the EDID data is not available, then set it as initialized EDID data.	EDIDH[x]B[y]
EDIDPCM[x].	Set the audio part of input port [x] to PCM format in EDID database.	EDIDPCM[x]

RS232 Commands

Command	Function	Feedback Example
EDIDG[x].	Get EDID data from output [x] and display the output port number.	Hexadecimal EDID data and carriage return character
EDIDMInit.	Restore the factory default EDID data of every input.	EDIDMInit.
EDIDM[X]B[Y].	Manually EDID switching. Enable input[Y] to learn the EDID data of output[X]. If the EDID data is not available, then set it as initialized EDID data.	EDIDM[X]B[Y]
EDIDUpgrade[x].	Upgrade EDID data via the RS232 port. [x] is the input port, when the value of X is 5, it means to upgrade all input ports. When the switcher receives the command, it will show a message to prompt you to send EDID file (.bin file). Operations will be canceled after 10 seconds. Please cut off all connections of HDBaseT ports.	Please send the EDID file
EDID/[x]/[y].	Set the EDID data of input port [x] to built-in EDID No.[y]. [y]=1~5, correspond to the 5 embedded EDID data separately	EDID/[x]/[y]
UpgradeIntEDID[x].	Upgrade one of the 5 embedded EDID data, x is the serial number for EDID data: 1. 1080P 2D 2CH 2. 1080P 3D 2CH 3. 1080P 2D Multichannel 4. 1080P 3D Multichannel 5. 3840x2160 2D (30Hz) When the switcher gets the command, it will show a message to send EDID file (.bin file). Operations will be invalid after 10 seconds.	Please send the EDID file
GetIntEDID[x].	Return the embedded EDID data ranked x, [x]=1~5	
GetInPortEDID[X]	Return the EDID data of input [x], [x]=1~4	
%0801.	Auto HDCP management, activate carrier native mode	%0801
%0900.	Switch to carrier native mode.	Carrier native

RS232 Commands

Command	Function	Feedback Example
%0901.	Switch to force carrier mode.	Force carrier
%0911.	Reset to factory default.	Factory Default
%9951.	Check the command sent by port 1 when PWON.	Port 1:data when PWON
%9952.	Check the command sent by port 2 when PWON.	Port 2:data when PWON
%9953.	Check the command sent by port 3 when PWON.	Port 3:data when PWON
%9954.	Check the command sent by port 4 when PWON.	Port 4:data when PWON
%9955.	Check the command sent by port 1 when PWOFF.	Port 1:data when PWOFF
%9956.	Check the command sent by port 2 when PWOFF.	Port 2:data when PWOFF
%9957.	Check the command sent by port 3 when PWOFF.	Port 3:data when PWOFF
%9958.	Check the command sent by port 4 when PWOFF.	Port 4:data when PWOFF
%9961.	Check the system locking status.	System Locked/ Unlock!
%9962.	Check the power status	STANDBY/PWOFF/ PWON
%9963.	Check the working mode of infrared carrier.	Carrier native/ Force carrier
%9964.	Check the IP address.	IP:192.168.0.178 (default)
%9971.	Check the connection status of the inputs.	In 01 02 03 04 Connect Y Y Y Y
%9972.	Check the connection status of the outputs.	Out 01 02 03 04 Connect Y Y Y Y
%9973.	Check the HDCP status of the inputs.	In 1 2 3 4 HDCP N N N N
%9974.	Check the HDCP status of the outputs.	Out 1 2 3 4 HDCP N N N N
%9975.	Check the I/O connection status.	Out 01 02 03 04 In 04 04 04 04
%9976.	Check the output resolution.	Out 1 1920x1080 Out 2 1920x1080

RS232 Commands

Command	Function	Feedback Example
		Out 3 1920x1080 Out 4 1920x1080
%9977.	Check the status of digital audio of output channels.	Out 1 2 3 4 Audio Y Y Y Y
%9978.	Check the HDCP compliant status of the inputs.	In 01 02 03 04 HDCPEN Y Y Y Y
I-Lock[X].	Lock the channel [x], X=1~4	Channel[x] Lock!
I-UnLock[X].	Unlock the channel [x], X=1~4	Channel[x] Unlock!
A-Lock.	Lock all channels	All Channel Lock!
A-UnLock.	Unlock all channels	All Channel Unlock!
Lock-Sta.	Check the lock status of all channels.	Channel 1->1 Lock! Channel 1->2 Lock! ..... Channel 2->1 Unlock! .....

TCP/IP Control

The Matrix Switcher can be controlled by PC with or without a LAN connection. Both PC and Matrix Switcher need to be in the same network segment.

Direct Control by PC

1. Connect your PC's Ethernet port to the TCP/IP port of the Matrix Switcher using a network cable.
2. Set the PC's network segment to the same setting as the Matrix Switcher.

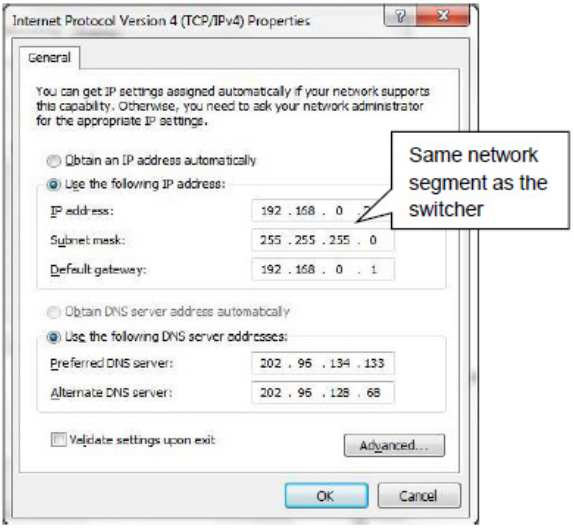


Figure 11: Network Settings

PC Control via Router

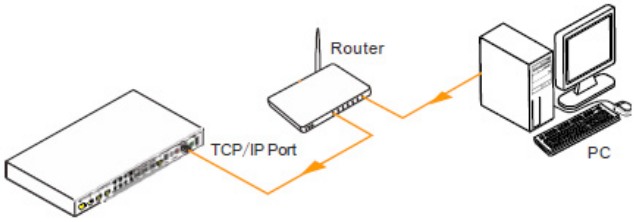


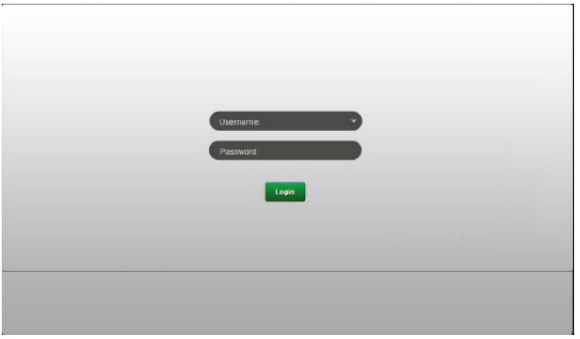
Figure 12: Router Connection

Hardware Installation

1. Connect the TCP/IP port of the Matrix Switcher to the Ethernet port of the PC with a network cable.
2. Set the PC's network segment to the same as the Matrix Switcher. Please write down the PC's orignal network setting because you will be using them again later.
3. Set the Matrix Switcher to the same network segment as the Router.
4. Set the PC's network settings to the original settings.
5. Connect the Matrix Switcher and PC to the router.
6. You are now able to control the Matrix Switcher via GUI over the router.

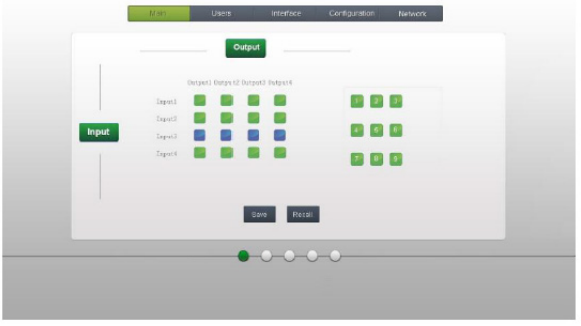
GUI Control

The Matrix Switcher comes with built-in GUI for convenient TCP/IP control. Open the GUI by typing 192.168.0.178 in your browser and the login interface, as shown below, will open.



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. Here is 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.

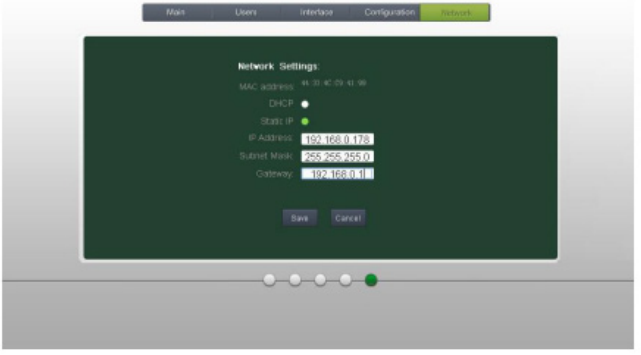
Users: Display or modify credential settings, front panel lock, and GUI version.

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

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

Configuration: Set HDCP Compliance status for every input, and manage EDID. See the screenshot below:

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



Note: Log in as user access main interface only.

EDID Management

The Matrix Switcher features EDID management to maintain compatibility between all devices. EDID can be controlled via EDID learning and setting embedded EDID.

EDID Learning

The included IR remote can be used to enable EDID learning.

One input port learns the EDID of one output port:

Example: Input 2 learns the EDID from output 4

- Press: EDID + INPUTS2 + OUTPUTS 4 + Enter

All input ports learn EDID from one output port:

Example: all input ports learn EDID from output 4

- Press: EDID + ALL + OUTPUTS 4 + ENTER

Embedded EDID

There are 5 embedded EDID. Use the RS232 Control Software to set the EDID information. The table below show the embedded EDID information.

No.	EDID Data
1	1080P 2D 2CH
2	1080P 3D 2CH
3	1080P 2D Multichannel
4	1080P 3D Multichannel
5	3840x2160 2D（30Hz）

Send the command "UpgradeIntEDID[x] using RS232 Control Software to set the embedded EDID data.
Note: x=1~5

FAQ & Troubleshooting

Problems	Potential Causes	Solutions
Color loss or no video signal output	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
	Fail or loose connection	Make sure the connection is good
No output image when switching	No signal at the input / output end	Check with oscilloscope or multimeter if there is any signal at the input/ output end.
	Fail or loose connection	Make sure the connection is good
	Input source is with HDCP while the HDCP compliance is switched off.	Send command /%[Y]/[X]:1. or change HDCP compliance status in GUI.
	The display doesn't support the input resolution.	Switch for another input source or enable the display to learn the EDID data of the input.
Cannot control the device via front panel buttons	Front panel buttons are locked.	Send command /%Unlock; or select unlock in GUI interface to unlock
Cannot control the device via IR remote	The battery has run off.	Change for new battery.
	The IR remote is broken.	Send it to authorized dealer for repairing.
	Beyond the effective range of the IR signal or not pointing at the IR receiver	Adjust the distance and angle and point right at the IR receiver.
	The IR receiver connected to IR IN port is not with carrier	Change for an IR receiver with carrier.
Power Indicator remains off when powered on	Fail or loose power connection	Check whether the cables are connected correctly

FAQ & Troubleshooting

EDID management does not work normally	The HDMI cable is broken at the output end.	Change for another HDMI cable which is in good working condition.
There is a blank screen on the display when switching	The display does not support the resolution of the video source.	Switch again.
		Manage the EDID data manually to make the resolution of the video source automatically compliant with the output resolution.
Cannot control the device by control device (e.g. a PC) through RS232 port	Wrong connection	Check to ensure the connection between the control device and the unit
	Wrong RS232 communication parameters	Type in correct RS232 communication parameters: Baud rate:9600; Data bit: 8; Stop bit: 1; Parity bit: none
	Broken RS232 port	Send it to authorized dealer for checking.
Static becomes stronger when connecting the video connectors	Bad grounding	Check the grounding and make sure it is connected well.
Cannot control the device by RS232 / IR remote / front panel buttons	The device has already been broken.	Send it to authorized dealer for repairing.

Specifications

Matrix Switcher

Video Input	
Input	4 HDMI
Input Connector	Female HDMI
Input Level	T.M.D.S. 2.9V~3.3V
Input Impedance	100Ω (Differential)
HDMI Standard	Support HDMI1.4 & HDCP2.2 and is backward compatible with all previous standards.
Video Output	
Output	1 HDMI – 3 HDBaseT
Output Connector	Female HDMI Female RJ45(with LED indicators)
Output Level	T.M.D.S. 2.9V~3.3V
Output Impedance	100Ω (Differential)
HDMI Standard	Support HDMI1.4 & HDCP1.4 and is backward compatible with all previous standards.
Video general	
Video Signal	HDMI (or DVI-D)
Transmission Distance	1080P@60Hz ≤70m 4Kx2K@60Hz ≤40m
Resolution Range	Up to 4Kx2K@60Hz
EDID Management	In-built EDID data and manual EDID management
Gain	0 dB
Bandwidth	10.2Gbit/s
Switching Speed	200ns (Max.)
Audio general	
Output Signal	Stereo audio Digital audio
Analog Audio Output	Support PCM
Digital Audio Output	Supports PCM，Dolby，DTS，DTS-HD
Frequency Response	20Hz~20KHz
Output Connector	1 L&R(RCA) 1 SPDIF
General	
Power Supply	Input: 100-240V~, 50/60Hz Output: DC 24V 2.71A
Power Consumption	35W (Max)
Temperature	0~ +50℃
Reference Humidity	10% ~ 90%
Dimension (W*H*D)	360mm x 28mm x 150 mm
Net weight	910g

HDBaseT Receiver

Input & Output	
Input	1 HDBaseT
Input Connector	Female RJ45(with LED indicators);
Output	1 HDMI
Output Connector	Female HDMI
Control	1 IR IN 1 IR OUT
Control Connector	3.5mm mini jacks
General	
Resolution Range	Up to 4K×2K@60Hz
Transmission Mode	HDBaseT
Transmission Distance	1080P@60Hz ≤70m 4Kx2K@60Hz ≤40m
Bandwidth	10.2Gbps
HDMI Standard	Support HDMI1.4 and HDCP1.4
Temperature	0~ +50℃
Humidity	10% ~ 90%
Power Supply	Powered by 4K HDBaseT Matrix Switcher.
Dimension (W*H*D)	61mm x 24mm x 120mm
Net Weight	280g

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