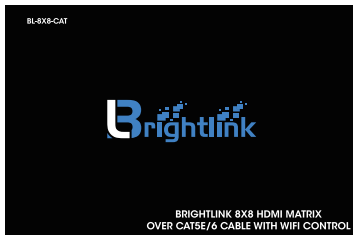


BRIGHTLINK 8x8 HDMI Matrix over Cat5e/6 cable • built in wifi**MODEL:BL-8X8-CAT****Operating Instructions****BRIGHTLINKAV.COM****Dear Customer**

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.

Features

- 8 HDMI input ports, 8 RJ45 Output ports.
- Transmission distance up to 50m under 1080P@60Hz over Single Cat5e or Cat6 cable.
- Transmission distance up to 30m under 1080P@60Hz over double Cat5e or Cat6 cable, support HDCP.
- Independent switch able EDID function for choosing which resolution to display.
- Support high definition resolutions 1080p, 1080i, 720p and other standard video formats.
- Supports LPCM 7.1 channel output from each of the independent HDMI ports.
- Switching modes: panel buttons, local IR, RS232 and Smart phone.
- Compliant HDCP.
- 1U'rack design for easy installation.
- Support 3D.
- With WIFI .

NOTICE

Our company reserve the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

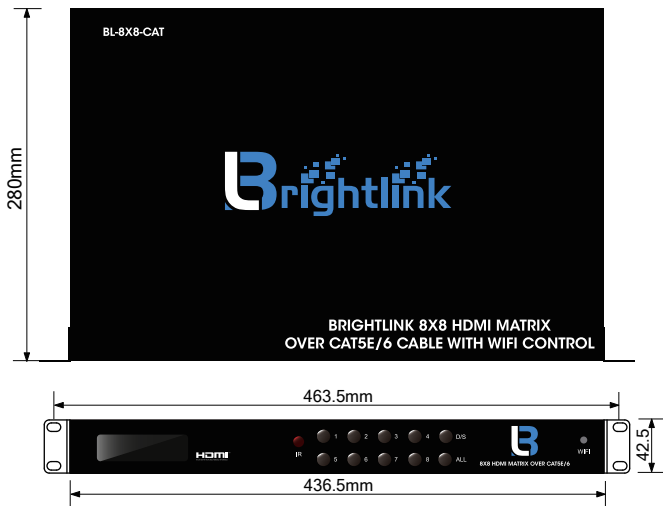
TABLE OF CONTENTS

- Package Contents
- Dimensional drawing
- Specifications
- Panel Descriptions
- Connecting and Operating
- Typical Application
- Maintenance
- Product Service
- Warranty

Packing contents

- 1) Main Unit: 8x8 HDMI Matrix
- 2) Power supply DC 12V 4A
- 3) Remote Controller
- 4) IR-RX cable x 1PCS
- 5) M3x5 Screw x 8PCS
- 6) Operating Instructions
- 7) Mounting ear
- 8) RS232 cable

Dimensional drawing

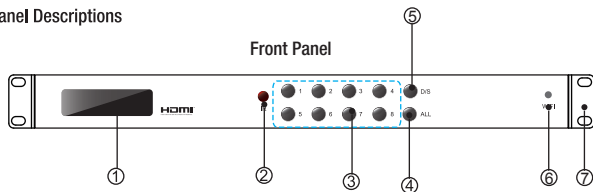


Specifications

Operating Temperature Range	-5 to +35 C(+23°to +95°
Operating Humidity Range	5 to 90%RH (No Condensation)
Video Bandwidth	225MHz/6.75Gbps
Video Format Supported	Up to 1080p@60Hz@24 b/pixels, support 3D
Connectors	HDMI receptacle. RJ45 receptacle Power connector terminal Power DC receptacle IR Extender
Transmission Distance	1080P 30m over Dual Cat5e/6 cable , support HDCP. 1080P 50m over Single Cat5e/6 cable ✖ Note: Please restart the matrix after changing the mode between double lan cable and single lan cable.
Power supply	110-240V/ 12VDC power supply
Power Consumption	24Watts
Enclosure	Cold-Rolled (Cold Rolled) Steel
Dimensions	W436.5xH280xT42.5mm
Weight	3800g

Note: Specifications are subject to change without notice. Mass and dimensions are approximate.

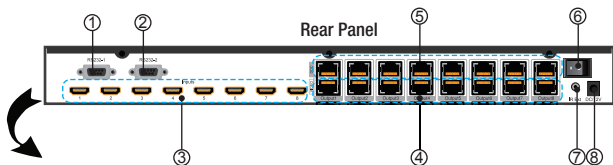
Panel Descriptions



- ① This monitor displays your settings information with each output and input selection
- ② IR windows:: infrared sensor receive any IR commands from the IR remote control.
- ③ OUT 1~8 & IN 1~8: . First select any output port from 1-8, wait 1 sec, then choose the desired input port from ports 1-8. Each output selection only allows a single input setting each time.For Example:

First select output port 5,wait 1 sec, then choose Input port 2,then "5-2" showed on the monitor displays. "5-2" LED lit means output 5 select input 2 as it's source.

- ④ ALL: Press this button to set all the outputs to display the same input source. First pressing the "All" button then,press an input number to confirm the selection.
- ⑤ D/S: Press this button to switch between Double LAN cable mode and single LAN cable mode.
- ⑥ WIFI: This slot is used to install the antenna.
- ⑦ Assembly ear



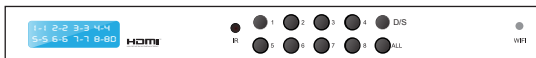
- ① RS232 port :For HDMI Matrix control on PC.
- ② RS232 port ;For WIFI module setup.
- ③ HDMI input ports(HDMI or DVI) .
- ④ RJ45 ports: Video outputs (When connect a single Cat5e/6 cable, just need connect the receiver to this port).
- ⑤ RJ45 ports:DDC outputs.
- ⑥ POWER: Press this button to turn the system on.
- ⑦ IR extension port : This slot is where you can extend your IR receiver with an IR extender cable (support 38KHz).
- ⑧ Power input : Plug the 12V 4A DC power supply into the unit and connect the adaptor to an AC wall outlet.

Connecting and operating

- 1) Connect the HDMI input sources into 8x8 HDMI Matrix.
- 2) Connect RJ45 out port of HDMI matrix with input port of receiver (When connect single cat5e/6 cable, please connect the receiver to Video outputs).
- 3) Connect HDMI receiver to display equipment by HDMI Cable.
- 4) Plug IR extension cable in IR extension port on the 8x8 HDMI Matrix
- 5) Power up all units, the matrix,Receiver, sources and displays.
- 6) Choose the desired input source by pressing panel button, local IR,RS232 or smart phone.

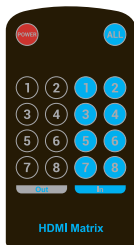
※Note: Please restart the matrix after changing the mode between double lan cable and single lan cable.

Operation



1. Front panel control

There are four groups of LEDs for each output port. The LED lit on the position means that the output port selects this input as its source. For eg. "5-8" led lit, means output 5 is selecting input 8 source.



2. Local IR remote control

User can control the HDMI route of the matrix by using the IR remote. There are two group key pads for sixteen ports.

Press the desired output source button, then press desired input button. (For example: Output 8 select Input 7 source, first Press Out 8, then press In 7, LCD will display "8-7")

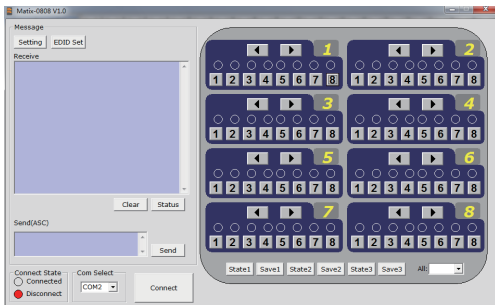
3. IR extension control

User can use the IR receiver cable to change the IR receiver position.

If controlling the HDMI matrix by remote control, connect the IR cable directly to the matrix rear IR Ext socket. (1/8" (3.5 mm) input jack).

4. RS232 remote control. (Connect the computer and R232 Port 1 by RS232 Cable)

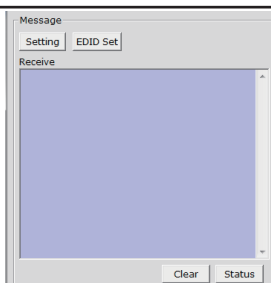
1. The Message Window



Operating Instructions

2.1 Receive Window

The "receive window" will show the message received from matrix. When you click the Control Buttons (see step 4) or send Control Command (see 2.3) to matrix, it will send out the message about "operation results" as right:



2.2 Status Button

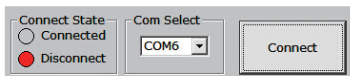
Click this button to read the status of Matrix. The status is about which input is selected by the output.

2.3 Send Window

Input the control command in this window. The control command use ASCII.



3.The Com Status



3.1 connect state.

Connect state shows the com connected or not. If it is connected, the state is green. Otherwise, the state is red.

3.2 com select.

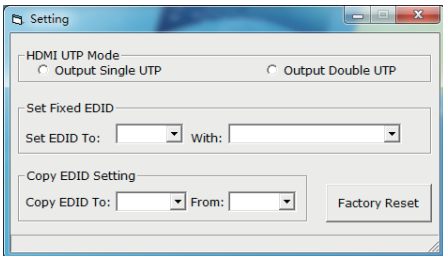
- Select which com you will use.
- Click "Connect" button to open the com.
- Click "disconnect" button to close the com.

3.3 Com port setting(for 2 RS232 port):

Baud Rate:	9600 bps
Data bits:	8 bits
Parity:	None
Stop bits:	1 bit
Flow control:	None

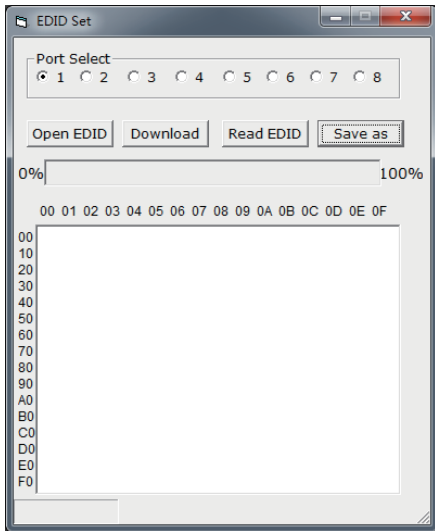
4 Setting Button

Click this button to enter Setting menu. If the signal is not stable, please turn on the S mode(Transmitter HDMI OVER sigle cat5e cable)



4.1 EDID Set button

- 1).Select the Output Port in "Port Select" column, click "Read EDID" button to get EDID from display equipment.
- 2).Select the Input Port in "Port Select" column, click "Download" button to set EDID of this Input Port same as display equipment.
- 3).Click "Save as" button to save EDID read from display equipment as "*.bin" file.
- 4).Click "Open EDID" button to open saved "*.bin" file, select the Input Port in "Port Select" column,
- 5).click "Download" button to set EDID of this Input Port as "*.bin" file.

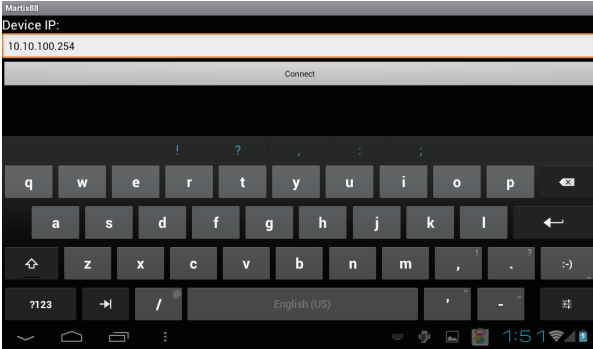


5.Android OS control

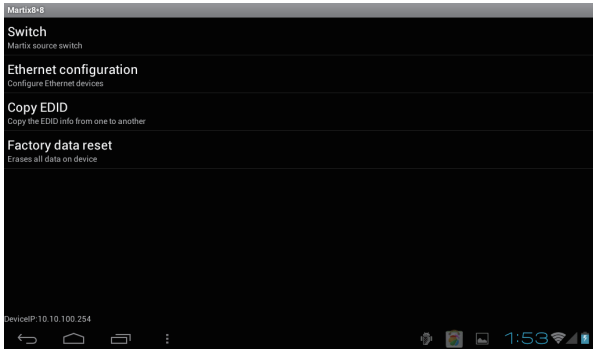
5.1 Install android apk(Matrix88.apk)

5.2 Connect device

Set the Wifi in your phone/ pad, run "matrix 88" , input equipment Wifi module's IP address (10.10.100.254), then click "connect" to enter.



Main menu



6.IOS control

6.1 Go to "App store ", search "Matrix88", download and install the APP.

6.2 Connect device

Set the Wifi in your iPhone/iPad ,run "Matrix88", input equipment WIFI module's IP address (10.10.100.254) ,then click "Button" to enter.



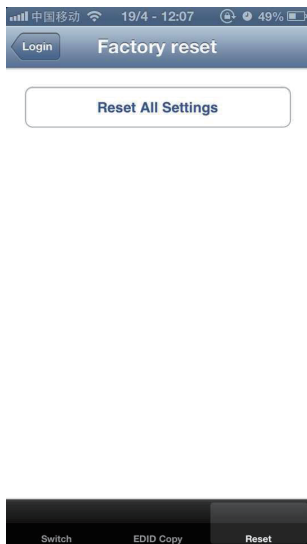
Device IP

10.10.100.254

Connect

Demo Mode



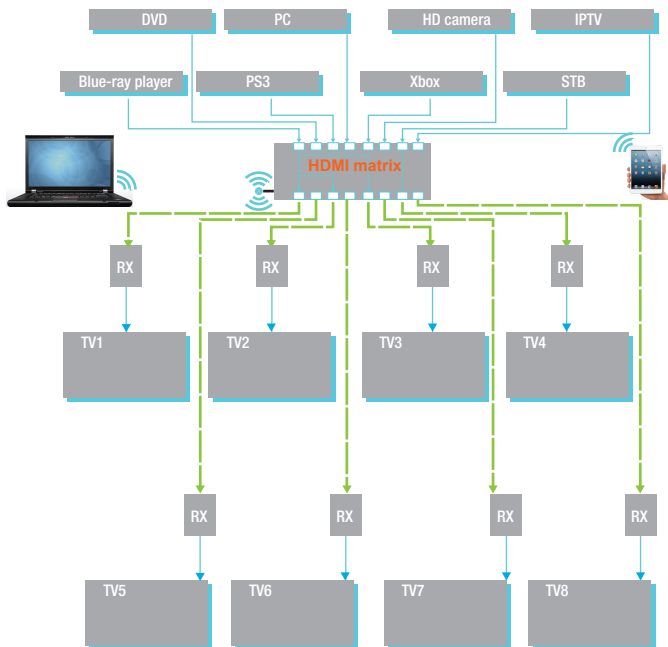


RS-232 pin assignment

HDMI Matrix			Remote Control Console	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	TX	→	2	RX
3	RX	←	3	TX
4	NC		4	NC
5	GND	—	5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Applications

Commercial and residential AV systems, Classroom projector systems, digital signage, Boardroom systems, collaborative PC systems



HDMI cable ————
Dual Cat5e/6 cable - - - -

RS-232 Commands

(The symbol "_ " in the following command means : Press the space key)

command	HEX	feedback	description
cir_0x\r\n	63 69 72 20 30 xx 0D 0A	s1y	Output 1 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_1x\r\n	63 69 72 20 31 xx 0D 0A	s2y	Output 2 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_2x\r\n	63 69 72 20 32 xx 0D 0A	s3y	Output 3 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_3x\r\n	63 69 72 20 33 xx 0D 0A	s4y	Output 4 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_4x\r\n	63 69 72 20 34 xx 0D 0A	s5y	Output 5 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_5x\r\n	63 69 72 20 35 xx 0D 0A	s6y	Output 6 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_6x\r\n	63 69 72 20 36 xx 0D 0A	s7y	Output 7 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
cir_7x\r\n	63 69 72 20 37 xx 0D 0A	s8y	Output 8 select input 1~8 "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
asw_x\r\n	61 73 77 20 xx 0D 0A	s1y s2y s3y s4y s5y s6y s7y s8y	All output select input x; "x" : indicate the input port, range from 0~7. "y" : indicate the input port, range from 1~8.
bc_\r\n	61 73 77 20 xx 0D 0A	s1x s2x s3x s4x s5x s6x s7x s8x	Obtain the input status. "x" : indicate the input port, range from 1~8.
sed_x_y\r\n	73 65 64 20 xx yy 0D 0A	sed_x_y	Copy edid from "x" to "y", "x" "y" range from 0~7
rst_\r\n	72 73 74 20 0D 0A		Reset factory settings

MAINTENANCE

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

PRODUCT SERVICE

Damage requiring service:

The unit should be serviced by qualified service personnel if:

- a) The DC power supply cord or AC adaptor has been damaged;
- b) Objects or liquids have gotten into the unit;
- c) The unit has been exposed to rain;
- d) The unit does not operate normally or exhibits a marked change in performance;
- e) The unit has been dropped or the cabinet damaged.

Servicing Personnel: Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

Replacement parts: When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.

Safety check: After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

WARRANTY

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will, for the length of the period indicated as below, (Parts(2)Year, Labor(90) Days) which starts with the date of original purchase ("Limited Warranty period"), at its option either(a) repair your product with new or refurbished parts, or (b) replace it with a new of a refurbished product. The decision to repair or replace will be made by the warrantor. During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

MAIL-IN SERVICE

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

LIMITED WARRANTY LIMITS AND EXCLUSIONS

1) This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.

The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributable to acts of God.

2) THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

3) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.