

HDMI Matrix System

HDTViM88 HDMI Matrix

User Manual



Brief Introduction

iM88 HDMI matrix with 12V power adapter for multiple HDMI sources to multiple display devices by different routing.

With high reliability, low power consumption, high bandwidth (support HDMI 1.4) features, iM88 can achieve up to 8x8 size. User can control the matrix operation by panel buttons, PC serial port and RJ45 (local area network)

The input/output routing status can be displayed on the LCM

User Control

1. Front Panel



Single Button:

Digital Button: 1, 2, 3, 4, 5, 6, 7, 8 respectively corresponding with HDMI output 1-8.

Loop press digital n (n=1..8), User can select HDMI output n routing status and displayed on the LCM

LOCK: Lock or unlock the button operation, if locked, the Lock Led will be lighted

Combination Button:

SAVE + n: Save the current routing status to item n (n=1,2,3,4,5,6,7,8)

RECALL + n: Recall item n routing status to current display (n=1,2,3,4,5,6,7,8)

EDID + 1: Auto parse EDID;

EDID + 2: Manual EDID operation by PC tool;

LCM display:

LCM displayed with two horizontal lines and eight vertical lines. Horizontal line 1 shows HDMI input ports, Horizontal line2 shows HDMI output port. Each vertical line shows the routing status.

2. Back panel



INPUTS: HDMI input 1,2,3,4,5,6,7,8 which connected to source devices

OUTPUTS: HDMI output 1,2,3,4,5,6,7,8 which connected to sink devices

RS232: PC Tool control,serial port

RJ45: PC Tool control,RJ45(local area network) port

PC tool user guide-RS232

The PC tool has two control modes: one is **UART** mode, another is **NETWORK** mode. The PC tool will connect to matrix automatically when it begins to execute. And the control mode is remembered by configuration file, which is also record the Input names and Output names of user's definition.

The difference between **UART** mode and **NETWORK** mode is the transmission media of control command. And the two modes have the same control operation of matrix. Therefore, there will be three parts of PC tool's operation which consists of the connection operation of **UART** mode, the connection operation of **NETWORK** mode and the control operation of matrix.

Instruction of connection operation of **UART** mode:



- 1) Connect the PC and iM88 matrix with RS232 cable
- 2) Double click the **PC tool software**. It will automatically connect to the matrix and work at **UART mode** if this is the 1st execution or it worked at **UART mode** when it executed last time. If last time it worked at **NETWORK mode**, you need to click the **UART** radio button, and select the **COM port** which is connected to your computer, then Click the **button** on the right of Status to connect.
- 3) If the connection is **successful**, the corresponding display will be blue
- 4) If the connection is **failed**, please **check** the causes and

retry again according to the software's hint.Usually,the causes may be as follows: No COM port connected to the computer,the COM port is used by other programmes,the matrix is not working well, and so on.

- 5) The **UART** radio button indicates the current control mode is UART mode.
- 6) The **combobox** on the right of Port shows the COM ports that connected to the computer. If there's no COM port connected,it will shows COM0,COM1...COM9.
- 7) The **button** on the right of Status indicates the current status of connection.You can switch the connection status by pressing this button.

Instruction of connection operation of NETWORK mode:



- 1) **Connect** the matrix and your computer to a same **LAN**. Recommended usage is using a **router** which is working well and the devices can obtain an IP address automatically when they connect to it.
- 2) Double click the **PC tool software**.It will automatically search the matrix devices and connect to the 1st device by network and work at **NETWORK mode** if it worked at NETWORK mode when it executed last time. If this is the 1st execution or last time it worked at UART mode,you need to click the **NETWORK** radio button,then click the search **button** to search matrix devices,then Click the **matrix device** in the list and click the **button** on the right of Status to connect.

- 3) If the connection is **successful**, the corresponding display will be blue
- 4) If the connection is **failed**, please **check** the causes and **retry** again according to the software's hint.Usually,the causes may be as follows: the matrix and your computer is not in a same LAN,the communication port is used by other programmes,the matrix is not working well, and so on.
- 5) The **NETWORK** radio button indicates the current control mode is NETWORK mode.
- 6) The **button** on the right of Status indicates the current status of connection. You can switch the connection status by pressing this button.
- 7) The **search** button can refresh the matrix list when you click it.
- 8) The search **list** shows the information of the matrix,include device name,device IP address,MAC address,version and so on.

clicking this button.The instruction of operation of EDID control is as below:

EDID Read Port (Output) : Select a output port which will do EDID operation.

EDID Write Port (Input) : Select input ports which will do EDID operation.

Save : Save IDID data to file on your computer.

Open : Open and show a file of EDID data.

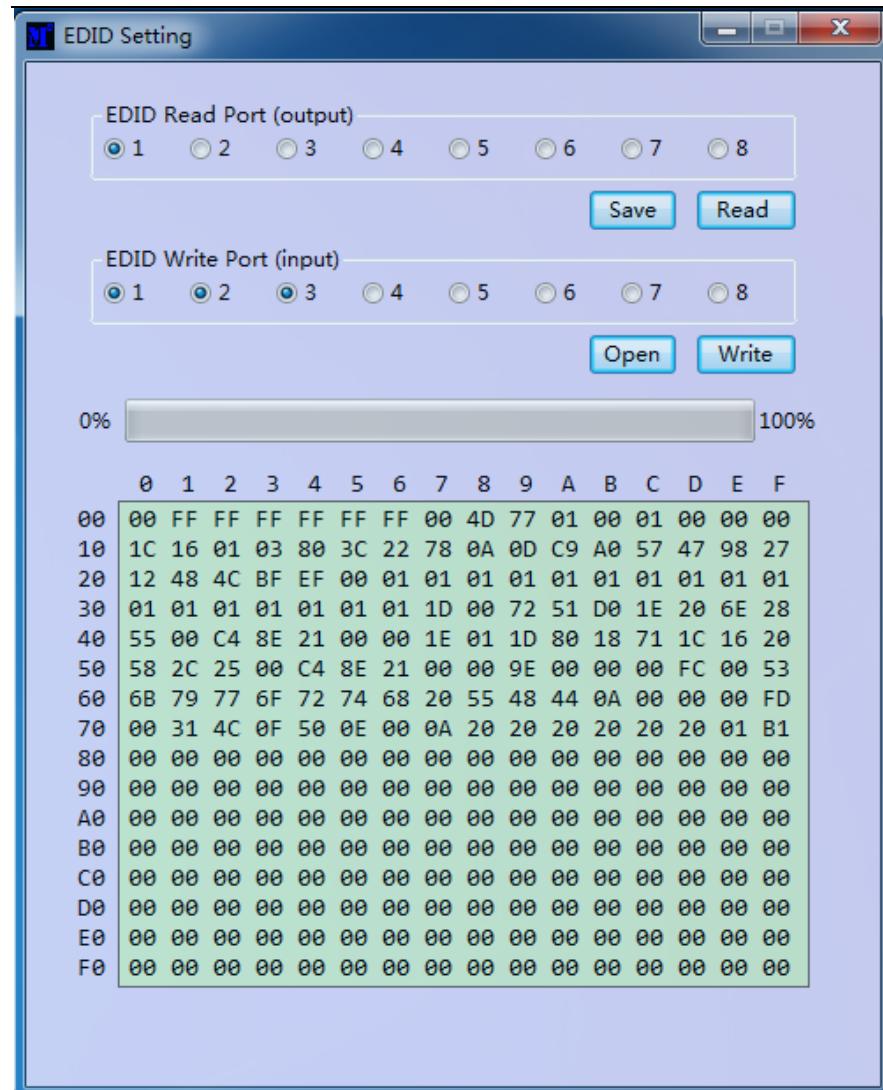
Read : Read EDID data from the selected HDMI port(output).

Write : Write EDID data to the selected HDMI port(input).

Instruction of control operation of matrix:

- 1) Click the **rectangle** which is on the right of output port and on the bottom of the input port can switch output port's input source.And the rectangle's color will change to **blue** if the operation is successful.Otherwise,you can try it again.
- 2) **All set**: Click the drop-down menu to select a input source which will be routed to all HDMI output port.
- 3) **Recall**: The drop-down menu to recall the item N routing
- 4) **Save as**: The drop-down menu to save the current routing status to item N status.
- 5) **Reset**: Reset the matrix configuration.
- 8) **EDID**: You can open or close the IDID control window by

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Note:

When read EDID from the Sinks,please make sure the cable between Matrix and Sinks(such as TV) connected well, and can normally display.

iM88 Parameters

Electrical parameters	
Interface	HDMI-A
HDMI version	HDMI1.4
Bandwidth	300MHz
Resolution	Up to 4Kx2K@30Hz
Clock Jitter	<0.15 T bit (1080p@60)
RiseTime	<0.3Tbit (20%--80%)
RiseTime	<0.3Tbit (20%--80%)
Transmission Delay	5ns
Amplitude	T.M.D.S +/- 0.4Vpp
Differential impedance	100±15ohm
RS232 control	
Baud rate and protocol	Baud rate: 9600,data bit: 8, stop bit: 1,No parity checking
Power	
Max Consumption	20W
Adapter	12V/3A
Matrix Mechanical dimensions	
Size(mm)	430(L)X220(W)X44 (H)
Weight	3Kg

Accessories List

Item	Quantity
Power Adapter	1
12V/3A	
User Manual CD	1
Matrix	1

Troubleshooting and Maintenance

- 1) When flicker or flash point on the screen, please check if the connection is reliable, whether the source is a standby or replace the HDMI cable
- 2) When user can't control matrix with PC, please check if com port No. is wrong settle on the PC tool
- 3) When the POWER led not lighted and no picture displayed,please check if the power adapter connected well and if the power switch in OFF.