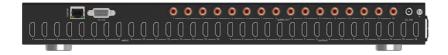


### 18Gbps 16x16 HDMI Matrixwith ARC Function

### iMatrix H1616A

User Manual V2.0





### www.infobitav.com info@infobitav.com

## 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.

## Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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## 1. Introduction

The 18Gbps 16x16 HDMI Matrix supports the transmission of video (resolution up to 4K2K@ 60Hz YUV 4:4:4) and multi-channel high resolution digital audio from 16 HDMI sources to 16 HDMI displays. Audio de-embedded to coaxial audio is supported from 16 HDMI output ports. While HDMI output ARC function is enabled, the ARC audio from HDMI display devices will be extracted to coaxial audio output. Each HDMI output of this 16x16 HDMI Matrix supports 4K2K to 1080P downscaler independently. Control via front panel buttons, IR remote, RS-232, LAN and Web GUI.

## 2. Features

- ☆ HDMI 2.0b, HDCP 2.2/1.x and DVI 1.0 compliant
- ☆ Video resolution up to 4K2K@60Hz (YUV 4:4:4) on all HDMI ports
- $\Rightarrow$  Support 18Gbps video bandwidth
- ☆ HDR, HDR10, HDR10+, Dolby Vision and HLG are supported.
- ☆ Support 4K->1080P Down Scaler for each output port
- ☆ HDMI audio pass-through up to 7.1CH HD audio (LPCM, Dolby TrueHD and DTS-HD Master Audio)

- $\,\, \mbox{\ensuremath{\mathbb R}}\,$  1U rack mounted design with front panel OLED display
- ☆ Control via front panel buttons, IR remote, RS-232, LAN and Web GUI

## 3. Package Contents

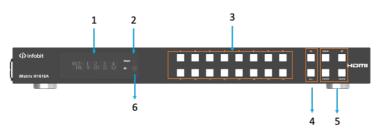
- ① 1 x 18Gbps 16x16 HDMI Matrix
- (2) 1 x 24V/3.75A Power Adapter
- ③ 1 x IR Remote
- ④ 1 x RS-232 serial cable (1.5 meters, male to female head)
- (5) 2 x Mounting Ear
- 6 1 x User Manual

# 4. Specifications

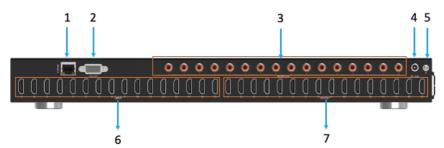
Technical					
HDMI Compliance	HDMI 2.0b				
HDCP Compliance	HDCP 2.2/1.x				
Video Bandwidth	18Gbps				
Video Resolution	Up to 4K2K@60H	Hz (4:4:4)			
Color Space	RGB, YCbCr 4:4:	:4/4:2:2/4:2:0			
Color Depth	8-bit, 10-bit, 12-b	it			
HDMI Audio Formats (Pass-through)		Dolby Digital, DTS 5. TS-HD Master Audio	.1, Dolby Digital+, , Dolby Atmos, DTS:X		
Coax Audio Formats	LPCM 2.0, Dolby	Digital / Plus, DTS 5	5.1		
HDR formats	HDR10, HDR10+	⊦, Dolby Vision, HLG			
ESD Protection	Human-body Model: ±8kV (Air-gap discharge) , ±4kV (Contact discharge)				
Connection					
Input Ports	16×HDMI Type A	[19-pin female]			
Output Ports	16×HDMI Type A 16×Coax Audio (				
Control Ports	1×TCP/IP [RJ45] 1×RS-232 [D-Su				
Mechanical					
Housing	Metal Enclosure				
Color	Black				
Dimensions	440mm (W)×200	mm (D)×44mm (H)			
Weight	3.1kg				
Power Supply		40V 50/60Hz, Output I, CE/FCC/ULcertified			
Power Consumption	76.8W				
Operating Temperature	-10°C ~ 45°C / 14°F ~ 113°F				
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F				
Relative Humidity	20~90% RH (non-condensing)				
Resolution / Cable length	4K60 - Feet / Meters	4K30 - Feet / Meters	1080P60 - Feet / Meters		
HDMI IN / OUT	16ft / 5M	32ft / 10M	50ft / 15M		
The use of "Premium Hig	h Speed HDMI" c	able is highly recomr	nended.		

# 5. Operation Controls and Functions

Front Panel

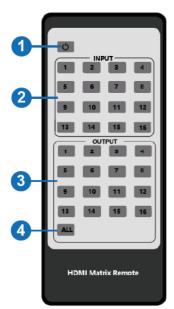


No.	Name	Function Description
1	OLED screen	Display matrix switching status, input / output port, EDID, Baud rate, IP Address.
2	Power LED	The LED will illuminate in green when the product is connected to power supply, and red when the product is on standby.
3	Input / Output buttons	You need to press input button (1~16) firstly, then press the "AV" button, finally press output button (1~16, including "Mulin) for sales the according incost and output ports.
4	AV / ALL buttons	AV: Used to switch signal source to output. e.g. Pressing "1 $\rightarrow$ AV $\rightarrow$ 3" represents signal source 1 is output to display 3. All: It represents all the output ports. e.g. Pressing "1 $\rightarrow$ AV $\rightarrow$ ALL" represents signal source 1 is output to all displays.
5	MENU / ENTER / UP /DOWN	<ul> <li>()EDID check: On the initial OLED display screen, press "MENU" button to enter the Matrix switching status interface, then press "UP/DOWN" button to check the switching state of all ports.</li> <li>()EDID setting: On the initial OLED display screen, press "MENU" button to enter the EDID setting interface, press "UP/DOWN" button to select the required EDID, and press the "ENTER" button. A prompt "copy to input :" will appear. Then press "UP/DOWN" button to select the input port you need to set, and press "ENTER" button again to confirm.</li> <li>(3)Baud rate setting: On the initial OLED display screen, press "MENU" button to select the required Baud rate, finally press the "ENTER" button to confirm the setting.</li> <li>(4)IP Address check: On the initial OLED display screen, press "MENU" button to enter the IP interface, then press "UP/DOWN" button to check the current IP address. Pressing the "MENU" button again will return to the initial OLED display status.</li> </ul>
6	IR Window	IR receiver window, it only receives the IR remote signal from this product.



No.	Name	Function Description
1	TCP/IP port	TCP/IP control port, connect to PC or router with an RJ45 cable.
2	RS-232 port	Connect to a PC or control system by D-Sub 9-pin cable to transmit RS-232 command.
3	AUDIO OUT (1-16)	Coaxial audio output port, connect to audio output device such as audio amplifier via a coaxial cable.
4	DC 24V	Connect to 24V power adapter.
5	GND	Connect the housing to the ground.
6	INPUT ports (1-16)	HDMI input ports , connect to HDMI source device such as DVD or set-top box with an HDMI cable.
7	OUTPUT ports (1-16)	HDMI output ports, connect to HDMI display device such as TV or monitor with an HDMI cable.

## 6. IR Remote



- (1) **Power on or Standby:** Power on the Matrix or set it to standby mode.
- ② Input 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16: Select input source button.
- ③ Output 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16: Select output source button.
- ④ All: Select all output sources simultaneously. For example, when you press input "1" button and then press the "All" button, at this time the input "1" source will be output to all display devices.

**Operation instruction:** You need to press the input button firstly and then press output button. For example, Press Input-Y

(Y means input button from 1 to 16)

Then press Output-X

(X means output button from 1 to 16, including "All" button)

## 7. EDID Management

This Matrix has 21 factory defined EDID settings, 2 user-defined EDID modes and 16 copy EDID modes. You can select defined EDID mode or copy EDID mode to input port through front panel buttons, RS-232 control or Web GUI.

**On-panel button operation:** On the initial OLED display screen, press "MENU" button to enter the EDID setting interface, press "UP/DOWN" button to select the required EDID, and press the "ENTER" button. A prompt "copy to input :" will appear. Then press "UP/DOWN" button to select the input port you need to set, and press "ENTER" button again to confirm this operation.

**RS-232 control operation:** Connect the Matrix to PC with a serial cable, then open a Serial Command tool on PC to send ASCII command "s edid in x from z!" to set EDID. For details, please refer to "EDID Setting" in the ASCII command list of "9. RS-232 Control Command".

**Web GUI Operation:** Please check the EDID management in the "Input page" of "8. Web GUI User Guide".

<b>⟨j̇̀⟩</b> infobit	INFOBIT HDMI M	IATRIX			ب ف	dmin Log out Power on
Status	Input Setting					
Video	Inputs	Active	Name	EDID		
Input	HDMI 1	•	Input 1	1080P,Stereo Audio 2.0 🔹		
Output	HDMI 2	•	Input 2	1080P,Stereo Audio 2.0 🔹		
CEC	HDMI 3	•	Input 3	1080P,Stereo Audio 2.0 👻		
Network	HDMI 4	•	Input 4	1080P,Stereo Audio 2.0 🔹		
System	HDMI 5	•	Input 5	1080P,Stereo Audio 2.0 👻		
	HDMI 6	•	Input 6	1080P,Stereo Audio 2.0 🔹		
	HDMI 7	•	Input 7	1080P,Stereo Audio 2.0 🔹		
	HDMI 8	•	Input 8	1080P,Stereo Audio 2.0 🔹		
	Load EDID to user	memory				
	Select EDID File:			Select Destination:	User Defined1 -	Upload
	Download EDID to	your computer				
	Select EDID File:	HDMI IN1				

The defined EDID setting list of the product is shown as below:

1         1080p, Stereo Audio 2.0           2         1080p, Dolby/DTS 5.1           3         1080p, HD Audio 7.1           4         1080i, Stereo Audio 2.0           5         1080i, HD Audio 7.1           7         3D, Stereo Audio 2.0           8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, Bolby/DTS 5.1           12         4K2K30_444, HD Audio 7.1           13         4K2K60_420, Bolby/DTS 5.1           14         4K2K60_420, Colby/DTS 5.1           15         4K2K60_420, Dolby/DTS 5.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Bolby/DTS 5.1           20         4K2K60_444, HD Audio 7.1           21         4K2K60_444, HD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1	EDID Mode	EDID Description
3         1080p, HD Audio 7.1           4         1080i, Stereo Audio 2.0           5         1080i, Dolby/DTS 5.1           6         1080i, HD Audio 7.1           7         3D, Stereo Audio 2.0           8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, HD Audio 7.1           12         4K2K30_444, HD Audio 7.1           13         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, Stereo Audio 2.0 HDR           20         4K2K60_444, Bolby/DTS 5.1 HDR           21         4K2K60_444, MD Audio 7.1           19         4K2K60_444, MD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 4           28         Copy from hdmi output 4           28         Copy from hdmi output 5 <td>1</td> <td>1080p, Stereo Audio 2.0</td>	1	1080p, Stereo Audio 2.0
4         1080i, Stereo Audio 2.0           5         1080i, Dolby/DTS 5.1           6         1080i, HD Audio 7.1           7         3D, Stereo Audio 2.0           8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, HD Audio 7.1           12         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Olby/DTS 5.1           15         4K2K60_420, Dolby/DTS 5.1           16         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, Bolby/DTS 5.1           19         4K2K60_444, Bolby/DTS 5.1 HDR           20         4K2K60_444, Bolby/DTS 5.1 HDR           21         4K2K60_444, Bolby/DTS 5.1 HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 7           31         Copy from hdmi output	2	1080p, Dolby/DTS 5.1
5         1080i, Dolby/DTS 5.1           6         1080i, HD Audio 7.1           7         3D, Stereo Audio 2.0           8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, HD Audio 7.1           12         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Olby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, Bolby/DTS 5.1           19         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, Bolby/DTS 5.1           19         4K2K60_444, Bolby/DTS 5.1 HDR           20         4K2K60_444, Bolby/DTS 5.1 HDR           21         4K2K60_444, Bolby/DTS 5.1 HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 7           31         Copy from hdmi output	3	1080p, HD Audio 7.1
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7         3D, Stereo Audio 2.0           8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, HD Audio 7.1           12         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, HD Audio 7.1 HDR           20         4K2K60_444, HD Audio 7.1 HDR           21         4K2K60_444, HD Audio 7.1 HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdm	5	1080i, Dolby/DTS 5.1
8         3D, Dolby/DTS 5.1           9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, HD Audio 7.1           12         4K2K30_444, HD Audio 7.1           13         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Stereo Audio 2.0           18         4K2K60_444, Bolby/DTS 5.1           19         4K2K60_444, Bolby/DTS 5.1           20         4K2K60_444, Bolby/DTS 5.1 HDR           21         4K2K60_444, HD Audio 7.1           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 2           26         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 7           32         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi o	6	1080i, HD Audio 7.1
9         3D, HD Audio 7.1           10         4K2K30_444, Stereo Audio 2.0           11         4K2K30_444, Dolby/DTS 5.1           12         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, Dolby/DTS 5.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Bereo Audio 2.0           17         4K2K60_444, Bolby/DTS 5.1           18         4K2K60_444, Bolby/DTS 5.1           19         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Bereo Audio 2.0 HDR           20         4K2K60_444, Bolby/DTS 5.1 HDR           21         4K2K60_444, Dolby/DTS 5.1 HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 2           26         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 8           32         Copy from hdmi output 10           34         Copy from hdmi output 11           35	7	3D, Stereo Audio 2.0
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11         4K2K30_444, Dolby/DTS 5.1           12         4K2K30_444, HD Audio 7.1           13         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Stereo Audio 2.0 HDR           20         4K2K60_444, Dolby/DTS 5.1 HDR           21         4K2K60_444, Dolby/DTS 5.1 HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 8           32         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi output 12           36         Copy from hdmi output 13           37         Copy from hdmi output 13           37         Copy from hdmi output 13           36	9	3D, HD Audio 7.1
12         4K2K30_444, HD Audio 7.1           13         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Stereo Audio 2.0 HDR           20         4K2K60_444, Dolby/DTS 5.1 HDR           21         4K2K60_444, HD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 2           26         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 8           32         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi output 12           36         Copy from hdmi output 13           37         Copy from hdmi output 14           38         Copy from hdmi output 15	10	4K2K30_444, Stereo Audio 2.0
13         4K2K60_420, Stereo Audio 2.0           14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Stereo Audio 2.0 HDR           20         4K2K60_444, Dolby/DTS 5.1 HDR           21         4K2K60_444, HD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 6           30         Copy from hdmi output 8           32         Copy from hdmi output 9           33         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi output 13           37         Copy from hdmi output 14           38         Copy from hdmi output 13	11	4K2K30_444, Dolby/DTS 5.1
14         4K2K60_420, Dolby/DTS 5.1           15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Bereo Audio 2.0 HDR           20         4K2K60_444, Bereo Audio 2.0 HDR           21         4K2K60_444, Dolby/DTS 5.1 HDR           21         4K2K60_444, HD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 2           26         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 8           32         Copy from hdmi output 9           33         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi output 13           37         Copy from hdmi output 14           38         Copy from hdmi output 14	12	4K2K30_444, HD Audio 7.1
15         4K2K60_420, HD Audio 7.1           16         4K2K60_444, Stereo Audio 2.0           17         4K2K60_444, Dolby/DTS 5.1           18         4K2K60_444, HD Audio 7.1           19         4K2K60_444, Stereo Audio 2.0 HDR           20         4K2K60_444, Dolby/DTS 5.1 HDR           21         4K2K60_444, HD Audio 7.1HDR           22         USER1           23         USER2           24         Copy from hdmi output 1           25         Copy from hdmi output 2           26         Copy from hdmi output 3           27         Copy from hdmi output 4           28         Copy from hdmi output 5           29         Copy from hdmi output 7           31         Copy from hdmi output 8           32         Copy from hdmi output 10           34         Copy from hdmi output 11           35         Copy from hdmi output 12           36         Copy from hdmi output 13           37         Copy from hdmi output 13           37         Copy from hdmi output 14	13	4K2K60_420, Stereo Audio 2.0
16 $4K2K60_444$ , Stereo Audio 2.017 $4K2K60_444$ , Dolby/DTS 5.118 $4K2K60_444$ , HD Audio 7.119 $4K2K60_444$ , Stereo Audio 2.0 HDR20 $4K2K60_444$ , Dolby/DTS 5.1 HDR21 $4K2K60_444$ , HD Audio 7.1HDR22USER123USER224Copy from hdmi output 125Copy from hdmi output 226Copy from hdmi output 327Copy from hdmi output 428Copy from hdmi output 529Copy from hdmi output 731Copy from hdmi output 832Copy from hdmi output 1034Copy from hdmi output 1135Copy from hdmi output 1337Copy from hdmi output 1438Copy from hdmi output 15	14	4K2K60_420, Dolby/DTS 5.1
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18 $4K2K60_444$ , HD Audio 7.119 $4K2K60_444$ , Stereo Audio 2.0 HDR20 $4K2K60_444$ , Dolby/DTS 5.1 HDR21 $4K2K60_444$ , HD Audio 7.1HDR22USER123USER224Copy from hdmi output 125Copy from hdmi output 226Copy from hdmi output 327Copy from hdmi output 428Copy from hdmi output 529Copy from hdmi output 731Copy from hdmi output 832Copy from hdmi output 1034Copy from hdmi output 1135Copy from hdmi output 1337Copy from hdmi output 1438Copy from hdmi output 15	16	4K2K60_444, Stereo Audio 2.0
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35Copy from hdmi output 1236Copy from hdmi output 1337Copy from hdmi output 1438Copy from hdmi output 15	33	Copy from hdmi output 10
36Copy from hdmi output 1337Copy from hdmi output 1438Copy from hdmi output 15	34	Copy from hdmi output 11
37Copy from hdmi output 1438Copy from hdmi output 15	35	Copy from hdmi output 12
38 Copy from hdmi output 15	36	Copy from hdmi output 13
	37	Copy from hdmi output 14
39 Copy from hdmi output 16	38	Copy from hdmi output 15
	39	Copy from hdmi output 16

## 8. Web GUI User Guide

The Matrix can be controlled by Web GUI. The operation method is shown as below: **Step 1:** Get the current IP Address.

The default IP address is 192.168.1.100. You can get the current Matrix IP address in two ways: **The first way:** You can get the IP address via panel buttons. On the initial OLED display, press "MENU" button to enter the IP interface, then press "UP/DOWN" button to check the current IP address.

**The second way:** You can get the IP address via RS-232 control. Send the command "r ipconfig!" through an ASCII Command tool, then you'll get the feedback information as shown below:

```
IP Mode: DHCP
IP:192.168.62.100
Subnet Mask:255.255.255.0
Gateway:192.168.62.1
TCP/IP port=8000
Telnet port=23
Mac address:6C:DF:FB:03:FB:6F
```

IP:192.168.62.100 in the above figure is the IP Address of the Matrix (the IP address is variable, depending on what the specific machine returns).

For the details of ASCII control, please refer to "9. RS-232 Control Command".

**Step 2:** Connect the TCP/IP port of the Matrix to a PC with an UTP cable, and set the IP address of the PC to be in the same network segment with the Matrix.

Step 3: Input the IP address of the Matrix into your browser on the PC to enter Web GUI page.

```
\left( \leftrightarrow \rightarrow \right) \left( \Rightarrow \right) \left( \Rightarrow \right) https://192.168.1.100/#/Login
```

After entering the Web GUI page, there will be a Login page, as shown below:

Cipinfobit Admin • Admin • Admin • Admin • Admin • Admin • Cipin • Login • RCOEF HOM MATRIX	A Admin *		
<ul> <li>▲ Admin *</li> <li>▲ Pressioned</li> <li>© English *</li> <li>Login</li> </ul>	A Admin *		
<ul> <li>▲ Admin *</li> <li>▲ Pressioned</li> <li>© English *</li> <li>Login</li> </ul>	A Admin * A Personnel C Englinh * Login		
🖨 Pessword 13 English - Login	ی Personal این English ۰ Login	<b><i̇́></i̇́></b> infol	bit
(t) English - Login	ی trgitah • Login	Admin	
		Password	
		English	
INFOBIT HDMI MATRIX	INFORT HOMI MATRIX		
		INFOBIT HDMI MA	TRIX

Select the Username from the list and enter the password. The default passwords are:

Username	User	Admin
Password	user	admin

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After entering the password, click the "LOGIN" button and the following Status page will appear.

### Status Page

The Status page provides basic information about the Model, the installed firmware version and the network settings of the device.

Status           Modi         Mumin HBMA           Primume Version         V12.06/07.07           Hobitum Mino         V12.06/07.07           Modie         Mumin HBMA           Primume Version         V12.06/07.07           Baberne Munok         192.786.1100           Datherne Version         192.596.256.25           Datherne Version         192.996.11	Status         Madei Nation HBBA           Modei Variado         V123.05407.07           Formanas Variado         V123.05407.07           Hodtrume         Madein HBBA           P-Address         192.956.100           Obborn Maak         255.055.05           Generary         192.990.11	Status       doi     Adde       Adde     Adders HEGA       CAL     Frimmers Variation       Appl     VI-33.004/2.07       Adders HEGA     Adders HEGA       Adders     Adders HEGA       Adders     Adders HEGA       Adders     Adders       Adders     Adders	Status           doc         Mode:         Mode:::EBM           xxxx         Primuma::Wandari         V1.22.60/02.07           xxxx         Primuma::Wandari         V1.22.60/02.07           xxxxx         Primuma::Wandari         V1.22.60/02.07           xxxxxx         Primuma::Wandari         V1.22.60/02.07           xxxxxx         Primuma::Wandari         V1.22.60/02.07           xxxxx         Galeway         295.295.295.01	infobit	INFOBIT HDMI MATRIX	💄 Admin 📔 Log
A Remark Version V1.51.66/V2.07 Premarks Version V1.51.66/V2.07 Remarks Version V1.51.66/V2.	Frimmana Varision V123.054/V287 Kontrume Address 186A # Address 1925.965.056.0 Subvet Mark 295.556.0 Gamesy 192.063.1	det     Frimware Ministri     V1.33.06V2.67       ppd     Fonthmere     Auktin HISA       ppd     # Address     192.568.1100       ppd     Sabore Mask     256.556.256.0       ppm     Geteway     192.568.11	Abit         Frances Watch         V12356/V267           Abit         Frances Watch         V12356/V267           Abit         Frances Watch         168           PrAderen         1925661.100         1925505.505.00           Abit         Galeway         1925505.505.00	Status	Status	
Filteware         Filteware         Filteware           A         Adverse         Adverse           B         Adverse         100 Mal 100           Adverse         255 255 256 20           Defense         100 Mal 100	Formares Vanision V123.04/V1237 Nationare Madeins 1083A IP Address 1923.9881.1000 Safenet Maak 2565.766.298.0 Addressy 1923.968.31	put     Finiture Version     V13330V297       tod     Holdmann     Addies HBBA       tod     IP Address     1102 V63.1100       soft     Salared Mask     256.256.256.0       sterm     Gateway     1102 V63.11	put firmware Version Vr122.04/V6.07 tot fields tot Pr4dees 192.04/16.100 5000 fields tot Galeway 192.041.10	Video	Model	
A Kolmane Akdin (BA PAdemin 1925/8110 Coloma 256,256.0	Hostnume Materia HBAA PASSHISS 992.548.1500 Saharel Maak 255.255.05.0 Gathewy 922.461.1	tod Hostmuna Addres/BBA KC PrAdemin 102/36.1100 Sdavod Mask 255.255.250 dateway 102.563.1	tot Hostowal Motors/88A to PASess 982.986.100 tot Galeway 192.986.11 data	Input		
IP Address         192.881.100           Submet Mask         295.295.256.0           Outrinew         192.941.1	# Address         192 K8.1 500           k         Subwell Mask         265/265.06.0           Gateway         192 K9.11	P Address         102 586.100           Mode         56.206 Mode           Mode         256.256.256.0           Atom         192.596.31	P-Advess         192.568.100           appl         Subred Mask         265.295.586.0           appl         Galeway         192.968.11	Output		
nk Submet Mask 255.256.256.0 Gatewar 192.748.11	k Guleway 192.168.11	Safare Mark         258,258,258,0           Alam         Galeway         192,988,11	and 545-545-56-5 Bahren Maak 255-545-56-0 Bahren 199-546.11			
Gateway 192.108.11		dem 192.168.11	Cateway 192.068.1			
					Gateway	
				ayseem		

### Video Page

INFOBIT HDMI I	MATRIX			💄 Admin	Log out Power on
Switch		Presets			
		Preset Name	Preset Set		
Output 1		Preset 1			
Output 2	Input 2 💌	Preset 2			
Output 3	Input 3 👻	Preset 3			
Output 4	Input 4 💌	Preset 4			
Output 5	Input 5 🔹	Preset 5			
Output 6	Input 6 •	Preset 6			
Output 7	Input 7 v	Preset 7			
Output 8	Input 8 v	Preset 8			
All Outputs					
	Ourput 1 Ourput 2 Ourput 2 Ourput 3 Ourput 4 Ourput 5 Ourput 6 Ourput 7 Ourput 8	Output         Input           Output1         Input 1           Output2         Input 2           Output3         Input 3           Output4         Input 4           Output5         Input 5           Output7         Input 6           Output7         Input 6	Durput     Input       Output1     Input1       Output2     Input2       Output3     Input3       Output4     Input4       Output5     Input6       Output6     Input7       Output6     Input7	Output     Input     Preset Name     Preset Set       Output1     Fput1     *     Preset 1     Set       Output2     Fput2     *     Preset 2     Set       Output3     Fput3     *     Preset 3     Set       Output4     Fput3     *     Preset 3     Set       Output5     *     Preset 4     Set       Output6     Fput5     Set     Set       Output6     *put6     *     Preset 6     Set       Output7     *put7     Set     Preset 7     Set       Output8     *put8     Set     Set     Set	Output         Input         Preset Name         Preset Set         Preset Som           Output 1         Frout 1         Frout 1         Set         Som           Output 2         Frout 2         Frout 2         Set         Som           Output 3         Frout 3         Frout 3         Set         Som           Output 4         Frout 3         Frout 4         Set         Som           Output 5         Frout 5         Frout 4         Set         Som           Output 6         Frout 5         Frout 6         Set         Som           Output 6         Frout 6         Frout 6         Set         Som           Output 6         Frout 7         Frout 7         Set         Som           Output 8         Frout 8         Set         Som

You can do the following operations on the Video page:

1) Output: The current device's OUTPUT port. You can select signal source for it.

(2) All Output: All OUTPUT ports for the current device. You can select signal source for them. ③ **Input:** You can click the drop-down menu to select signal source for the corresponding OUTPUT port .

(4) Presets Name: You can name the current scene with maximum length of 12 characters (Chinese name is unsupported).

⑤ Presets Set: You can restore the settings of the last saved audio-video matrix switching relationship.

6 Presets Save: You can save audio-video matrix switching relationship.

⑦ Presets Clear: You can clear the saved audio-video matrix switching relationship.

### Input Page

You can do the following operations on the Input page:

1) Inputs: Input channel of the device.

<b>⟨i⟩</b> infobit	INFOBIT HDM	MATRIX		<b>1</b> M	Inin Log out Power on
Status	Input Setting				
Video					
Input					
Output					
CEC					
Network					
System					
	Load EDID to us				
	Download EDID	to your computer			

② Active: It indicates whether the channel is connected to a signal source.

③ **Name:** The input channel's name. You can modify it by entering the corresponding name (max length: 12 characters) in the input box (Chinese name is unsupported).

④ EDID: You can set the current channel's EDID. The specific operation is as follows:

#### Set EDID for the User

Click the "Browse" button, then select the bin file. If you select the wrong EDID file, there will be a prompt, as shown in the following figure:



Make sure to select the correct file, then you can check the name of the selected file. Select "User 1" or "User 2", then click "Upload". After successful setting, it will prompt as follows:

0	
Upload Successful!	
Confirm	

### Download the EDID File of the Corresponding Input Channel

Click the drop-down box of "Select EDID File" to select the corresponding input channel. Then click "Download" to download the corresponding EDID file.

### Output Page

<b>⟨i⟩</b> infobit	INFOBIT HDMI	MATRIX				Admin Log out Power on
Status	Output Settin	g				
Video	Outputs			Scaler Mode	C Stream	
Input		•	Output 1	Bypass		
Output	Output 2	•	Output 2	Bypass	01 ON	
CEC	Output 3	•	Output 3	Bypass		
Network	Output 4	•	Output 4	Bypass		
System	Output 5	•	Output 5	Bypass		
	Output 6	•	Output 6	Bypass		
	Output 7	•	Output 7	Bypass		
	Output 8	•	Output 8	Bypass		

You can do the following operations on the Output page:

① **Outputs:** Output channel of the device.

O Cable: It indicates the connection status of output ports. When the output port is connected to the display, it shows green, otherwise, it shows gray.

③ **Name:** The current output channel's name. You can modify it by entering the corresponding name (max length: 12 characters) in the input box (Chinese name is unsupported).

④ Scaler Mode: Set the current output resolution mode.

(5) **ARC:** Turn on/off the ARC function.

6 Stream: Turn on/off the output stream.

#### CEC Page

(í) infobit	INFOBIT HDMI MATRIX						Admin Logo	ut Pow
Status	CEC							
Video		Input Contro				Output Contro		
Input								
Output		٩		C		Ø	C	
CEC	Input 2							
Network	Input 3		•					
System		•	Ļ				♦ +	
System		=	•	5				
		M		м				
		*	Ш	₩				
			<b>■</b> ₽					

You can perform CEC management on this page:

① Input Control: You can control the operation of each input source by clicking the icons on the page.

② **Output Control:** You can control the operation of each display, such as power on/off, volume +/-, active source switching.

### Network Page Set the Default Network

<b>⟨j⟩</b> infobit	INFOBIT HDMI MA	TRIX			1	Admin Log out	Power on
Status	IP Setting						
Video	IP Mode	Statio	DHCP				
Input	IP Address			Gateway			
Output	Subnet			Telnet Port			
CEC							
Network	Web Login Setti	na					
System	Username	User	Admin				
	Old Password						
	Product Model	iMatrix H88A					

Click "Set Network Defaults", there will be a prompt, as shown in the following figure: Click "OK" to search the IP Address again, as shown in the following figure:

distant in						
<b>⟨i⟩</b> infobit						
Status		DHCP				
Video						
Input						
Output						
CEC						
Network	User	Admin				
System			Searching IP			

After searching is completed, it will switch to the login page, the default network setting is completed.

### **Modify Username**

Click the "User" button, enter the correct Old Password, New Password, and Confirm Password, then click "Save". After successful modification, there will be a prompt, as shown in the following figure:



Note: Input rules for changing passwords:

- (1) The password can't be empty.
- (2) New Password can't be the same as Old Password.
- (3) New Password and Confirm Password must be the same.

#### **Modify Network Setting**

Modify the Mode/IP Address/Gateway/Subnet Mask/Telnet Port as required, click "Save" to save the settings, then it will come into effect.

After modification, if the Mode is "Static", it will switch to the corresponding IP Address; if the Mode is "DHCP", it will automatically search and switch to the IP Address assigned by the router.

<b>⟨i⟩</b> infobit	INFOBIT HDMI MATRIX						Admi
	IP Setting						
Status	IP Mode		DHCP				
Video	IP Address			Gatewa			
Input	Subnet			Telnet I			
Output							

#### System Page

System       System       Notes     Definition       Notes     Definition       Color     Definition       System     Definition	<i̇́>infobit</i̇́>	INFOBIT HDMI MATRIX	💄 Admin 🛛 Logout Powers
Text Boo Capue Control Capue C		System	
Type:         LD         30.         +           Origin         Sond market         T1500         +           CIC         Sond market         T1500         +           Network         Parmare Dodde         -         Lippine           System         Brown.         Lippine         Lippine           Factory Result         Instant         Instant         Instant			
Odput Seven Mand Hale 11500 +  System Premare Lydole Lyddole Lydole Lydole Lydole Lydole Lydole Lyddole Lydole Lydole Lydole Lyddole L		Beep ON	
CIC Primare Lyckie Cude Cude Cude Cude Cude Cude Cude Cud			
System Prevence Update Update Update Update Environment			
Room. Ludor Factory Roat Reat	Network	Firmware Update	
	System		

① **Panel Lock:** Click "Panel Lock" to lock/unlock panel buttons. "On" indicates that panel buttons are unavailable; "Off" indicates panel buttons are available.

② Beep: Click "Beep" to turn on/off the beep.

③ LCD: You can turn on/off the LCD, and set the turn-on time (15s/30s/60s).

④ Serial Baud Rate: Click the value to set the Serial Baud Rate.

⑤ **Firmware Update:** Click "Browse" to select the update file, then click "Update" to complete firmware update.

6 Factory Reset: You can reset the unit to factory defaults by clicking "Reset".

⑦ Reboot: You can reboot the unit by clicking "Reboot".

**Note:** After reset/reboot, it will switch to the login page.

## 9. RS-232 Control Command

The product also supports RS-232 control. You need a serial cable with RS-232 male head and DB9 transfer USB male head. The RS-232 head of the serial cable is connected to the RS-232 control port with DB 9 at the rear of the Matrix, and the USB head of the serial cable is connected to a PC. The connection method is as follows:



Then, open a Serial Command tool on PC to send ASCII command to control the Matrix. The ASCII command list about the product is shown as below.

	ASCII	Command		
Serial port protocol	. Baud rate: 115200, Data bits: 8	bit, Stop bits:1, Ch	neck bit: 0	
x - Parameter 1 y - Parameter 2 ! - Delimiter				
Command Code	Function Description	Example	Feedback	Default Setting
Power				
s power z!	Power on/off the device,z=0~1 (z=0 power off, z=1 power on)	s power 1!	Power on System Initializing Initialization Finished! FW version x.xx.xx	power on
r power!	Get current power state	r power!	power on/power off	
s reboot!	Reboot the device	s reboot!	Reboot System Initializing Initialization Finished! FW version x.xx.xx	
System Setup				
help!	List all commands	help!		
r type!	Get device model	r type!	HDP-MXB1616	

Command Code	Function Description	Example	Feedback	Default Setting
r status!	Get device current status	r status!	Get the unit all status: power, beep, lock, in/ out connection, video/ audio crosspoint, edid, scaler, network status	
r fw version!	Get Firmware version	r fw version!	MCU BOOT: Vx.xx.xx MCU APP: Vx.xx.xx WEB GUI: Vx.xx	
r link in x!	Get the connection status of the x input port, x=0~16(0=all)	r link in 1!	hdmi input 1: connect	
r link out y!	Get the connection status of the y output port, $y=0~16(0=all)$	r link out 1!	hdmi output 1: connect	
s reset!	Reset to factory defaults	s reset!	Reset to factory defaults System Initializing Initialization Finished! FW version x.xx.xx	
s beep z!	Enable/Disable buzzer function, z=0~1(z=0 beep off, z=1 beep on)	s beep 1!	beep on beep off	beep on
r beep!	Get buzzer state	r beep!	beep on / beep off	
s lock z!	Lock/Unlock front panel button, z=0~1(z=0 lock off,z=1 lock on)	s lock 1!	panel button lock on panel button lock off	panel button lock off
r lock!	Get panel button lock state	r lock!	panel button lock on/off	
s lcd on time z!	Set LCD screen remain on time, z=0~4(0:off, 1:always on, 2:15s, 3:30s, 4:60s)	s lcd on time 1!	lcd on 15 seconds	lcd on 30 seconds
r lcd mode!	Get the backlight status of lcd screen	r lcd mode!	lcd always on	
s save preset z!	Save switch state between all output port and the input port to preset z, z=1~8	s save preset 1!	save to preset 1	
s recall preset z!	Call saved preset z scenarios, z=1~8	s recall preset 1!	recall from preset 1	
s clear preset z!	Clear stored preset z scenarios, z=1~8	s clear preset 1!	clear preset 1	
r preset z!	Get preset z information, z=1~8	r preset 1!	video/audio crosspoint	
Output Setting				
s in x av out y!	Set input x to output y, x=1~16, y=0~16(0=all)	s in 1 av out 2!	input 1 -> output 2	PTP
r av out y!	Get output y signal status y=0~16(0=all)	r av out 0!	input 1 -> output 1 input 2 -> output 2  input 16 -> output 16	
s hdmi y stream z!	z=0~1(0:disable,1:enable)	s hdmi 1 stream 1! s hdmi 0 stream 1!	Enable hdmi output 1 stream Disable hdmi output 1 stream Enable hdmi all outputs stream Disable hdmi all outputs stream	enable
r hdmi y stream!	Get output y stream status, y=0~16(0=all)	r hdmi 1 stream!	Enable hdmi output 1 stream	
s hdmi y scaler z!	Set hdmi output y port output scaler mode, y=0~16 (0=all), z=1~3(1=bypass, 2=4k->1080p, 3=Auto)	s hdmi 1 scaler 1! s hdmi 0 scaler 1!	hdmi output 1 set to bypass mode hdmi all outputs set to bypass mode	hdmi all outputs set to bypass mode

Command Code	Function Description	Example	Feedback	Default Setting
r hdmi y scaler!	Get hdmi output y port output mode y=0~16(0=all)	r hdmi 1 scaler !	hdmi output 1 set to bypass mode	
EDID Setting				
s edid in x from z!	Set input x EDID from default EDID z, x=0~16 (0=all),z=1~39 1, 1080p,Stereo Audio 2.0 2, 1080p,Dolby/DTS 5.1 3, 1080p,HD Audio 7.1 4, 1080i,Stereo Audio 2.0 5, 1080i,Dolby/DTS 5.1 6, 1080i,HD Audio 7.1 7, 3D,Stereo Audio 2.0 8, 3D,Dolby/DTS 5.1 9, 3D,HD Audio 7.1 10, 4K2K30-444,Dolby/DTS 5.1 12, 4K2K30-444,Dolby/DTS 5.1 12, 4K2K60-420,Stereo Audio 2.0 4, 4K2K60-420,Stereo Audio 2.0 4, 4K2K60-420,Dolby/DTS 5.1 15, 4K2K60-420,Bolby/DTS 5.1 16, 4K2K60-420,Dolby/DTS 5.1 17, 4K2K60-444,Dolby/DTS 5.1 18, 4K2K60-444,At,Dolby/DTS 5.1 18, 4K2K60-444,At,Dolby/DTS 5.1 19, 4K2K60-444,At,Dolby/DTS 5.1 18, 4K2K60-444,At,Dolby/DTS 5.1 14, 4K2K60-444,At,Dolby/DTS 5.1 17, 4K2K60-444,At,Dolby/DTS 5.1 18, 4K2K60-444,At,Dolby/DTS 5.1 17, 4K2K60-444,At,Dt 17, 4K2K60-444,At,Dt 17, 4K2K60-444,At,Dt 17, 4K2K60-444,At,Dt 18, 4K2K60-444,A	s edid in 1 from 1! s edid in 0 from 1!	input 1 EDID:1080p, Stereo Audio 2.0 all inputs EDID:1080p, Stereo Audio 2.0	1080p,Stereo Audio 2.0
r edid in x!	Get EDID status of the input x, x=0~16(0=all input)	r edid in 0!	input 1 EDID: 4K2K60_444, Stereo Audio 2.0 input 2 EDID: 4K2K60_444, Stereo Audio 2.0 input 3 EDID: 4K2K60_444, Stereo Audio 2.0 input 4 EDID: 4K2K60_444, Stereo Audio 2.0	
r edid data hdmi y!	Get the EDID data of the hdmi output y port, y=1~16	r edid data hdmi 1!	EDID: 00 FF FF FF FF FF FF 00	
Audio Setting				
s hdmi y arc z!	Turn on/off ARC of HDMI output y, y=0~16(0=all) z=0~1(z=0,off,z=1 on)	s hdmi 1 arc 1! s hdmi 0 arc 1!	hdmi output 1 arc on hdmi output 1 arc off hdmi all outputs arc on hdmi all outputs arc off	
r hdmi y arc!	Get the ARC state of HDMI output y, y=0~16(0=all)	r hdmi 1 arc!	hdmi output 1 arc on	off

Command Code	Function Description	Example	Feedback	Default Setting
CEC Setting				
s cec in x on!	set input x power on by CEC, x=0~16(0=all input)	s cec in 1 on!	input 1 power on	
s cec in x off!	set input x power off by CEC, x=0~16(0=all input)	s cec in 1 off!	input 1 power off	
s cec in x menu!	set input x open menu by CEC, x=0~16(0=all input)	s cec in 1 menu!	input 1 open menu	
s cec in x back!	set input x back operation by CEC, x=0~16(0=all input)	s cec in 1 back!	input 1 back operation	
s cec in x up!	set input x menu up operation by CEC, x=0~16(0=all input)	s cec in 1 up!	input 1 menu up operation	
s cec in x down!	set input x menu down operation by CEC, x=0~16(0=all input)	s cec in 1 down!	input 1 menu down operation	
s cec in x left!	set input x menu left operation by CEC, x=0~16(0=all input)	s cec in 1 left!	input 1 menu left operation	
s cec in x right!	set input x menu right operation by CEC, x=0~16(0=all input)	s cec in 1 right!	input 1 menu right operation	
s cec in x enter!	set input x menu enter by CEC, x=0~16(0=all input)	s cec in 1 enter!	ilnput 1 menu enter operation	
s cec in x play!	set input x play by CEC, x=0~16(0=all input)	s cec in 1 play!	input 1 play operation	
s cec in x pause!	set input x pause by CEC, x=0~16(0=all input)	s cec in 1 pause!	ilnput 1 pause operation	
s cec in x stop!	set input x stop by CEC, x=0~16(0=all input)	s cec in 1 stop!	input 1 stop operation	
s cec in x rew!	set input x rewind by CEC, x=0~16(0=all input)	s cec in 1 rew!	input 1 rewind operation	
s cec in x mute!	set input x volume mute by CEC, x=0~16(0=all input)	s cec in 1 mute!	input 1 volume mute	
s cec in x vol-!	set input x volume down by CEC, x=0~16(0=all input)	s cec in 1 vol-!	input 1 volume down	
s cec in x vol+!	set input x volume up by CEC, x=0~16(0=all input)	s cec in 1 vol+!	input 1 volume up	
s cec in x ff!	set input x fast forward by CEC, x=0~16(0=all input)	s cec in 1 ff!	input 1 fast forward operation	
s cec in x previous!	set input x previous by CEC, x=0~16(0=all input)	s cec in 1 previous!	input 1 previous operation	
s cec in x next!	set input x next by CEC, x=0~16(0=all input)	s cec in 1 next!	input 1 next operation	
s cec hdmi out y on!	set hdmi output y power on by CEC, y=0~16(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power on	
s cec hdmi out y off	set hdmi output y power off by CEC, y=0~16(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power off	
s cec hdmi out y mute!	set hdmi output y volume mute by CEC, y=0~16(0=all output)	s cec hdmi out 1 mute!	hdmi output 1 volume mute	
s cec hdmi out yvol-!	set hdmi output y volume down by CEC, y=0~16(0=all output)	s cec hdmi out 1vol-!	hdmi output 1 volume down	
s cec hdmi out y vol+!	set hdmi output y volume up by CEC, y=0~16(0=all output)	s cec hdmi out 1 vol+!	hdmi output 1 volume up	
s cec hdmi out y active!	set hdmi output y active source by CEC, y=0~16(0=all output)	s cec hdmi out 1 active!	hdmi output 1 active source	

Command Code	Function Description	Example	Feedback	Default Setting
Network Setting				
r ipconfig!	Get the Current IP Configuration	r ipconfig!	IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 Mac address: 00:1C:91:03:80:01	
r mac addr!	Get network MAC address	r mac addr!	Mac address: 00:1C:91:03:80:01	
s ip mode z!	Set network IP mode to static IP or DHCP, z=0~1 (z=0 Static, z=1 DHCP )	s ip mode 0!	Set IP mode:Static (Please use "s net reboot!" command or repower device to apply new config!)	
r ip mode!	Get network IP mode	r ip mode!	IP Mode: Static	
s ip addr xxx.xxx.xxx.xxx!	Set network IP address	s ip addr 192.168.1.100!	Set IP address: 192.168.1.100 (Please use "s net reboot!" command or repower device to apply new config!) DHCP on, Device can't config static address, set DHCP off first.	
r ip addr!	Get network IP address	r ip addr!	IP address: 192.168.1.100	
s subnet xxx.xxx.xxx.xxx!	Set network subnet mask	s subnet 255.255.255.0!	Set subnet Mask: 255.255.255.0 (Please use "s net reboot!" command or repower device to apply new config!) DHCP on, Device can't config subnet mask, set DHCP off first.	
r subnet!	Get network subnet mask	r subnet!	Subnet Mask: 255.255.255.0	
s gateway xxx.xxx.xxx.xxx!	Set network gateway	s gateway 192.168.1.1!	Set gateway: 192.168.1.1 Please use "s net reboot!" command or repower device to apply new config! DHCP on, Device can't config gateway, set DHCP off first.	
r gateway!	Get network gateway	r gateway!	Gateway:192.168.1.1	
s tcp/ip port x!	Set network TCP/IP port (x=1~65535)	s tcp/ip port 8000!	Set TCP/IP port:8000	
r tcp/ip port!	Get network TCP/IP port	r tcp/ip port!	TCP/IP port:8000	
s telnet port x!	Set network telnet port (x=1~65535)	s telnet port 23!	Set Telnet port:23	
r telnet port!	Get network telnet port	r telnet port!	Telnet port:23	

Command Code	Function Description	Example	Feedback	Default Setting
s net reboot!	Reboot network modules	s network reboot!	Network reboot IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 Mac address: 00:1C:91:03:80:01	

## **11. Application Example**

