

BLACKBIRD™



Blackbird™ by Monoprice™
PRO 4K 8 × 8 HDMI® MATRIX

P/N **44557**
User Manual

SAFETY WARNINGS AND GUIDELINES

Please read this entire manual before using the Blackbird™ Pro 4K 8 × 8 HDMI® Matrix, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

- This device is intended for indoor use only.
- Do not expose this device to water or moisture. Do not place drinks or other containers with moisture on or near the unit. If moisture does get in or on the unit, immediately unplug it from the power source and allow it to fully dry before reapplying power.
- Do not touch this device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessive vibration, extreme force, shock, or fluctuations in temperature or humidity.
- Do not expose the unit to excessively high temperatures. Do not place it in, on, or near heat sources, like a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Do not place or install the unit in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or explosive vapors.
- Before operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.
- Unplug this transceiver from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug this device by pulling on the power cord. Always grasp the connector head or adapter body.
- Ensure power is turned off and disconnected before making any electrical connections.
- Do not use chemical cleaners or solvents to clean these mounts. Use only a soft cloth that's slightly moistened with warm water.
- This device has no user-serviceable parts. Do not attempt to open, service, or modify it.

⚠ WARNING	
• INGESTION HAZARD: This product contains a button cell or coin battery • DEATH or serious injury can occur if ingested. • A swallowed button cell or coin battery can cause Internal Chemical Burns in as little as 2 hours. • KEEP new and used batteries OUT OF REACH of CHILDREN • Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.	

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep them away from children. Do NOT dispose of batteries in household trash or incinerate them.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- Identification of compatible battery type: CR2025
- Nominal battery voltage: 3V
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating), or incinerate. Doing so may result in injury due to venting, leakage, or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands, or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

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INTRODUCTION

This Blackbird™ Pro 4K 8 × 8 HDMI® Matrix by Monoprice™ is an ideal solution for transmitting video and multi-channel high-resolution digital audio from up to 8 HDMI® sources to 8 HDMI® displays. This device supports video transmission up to 4K2K @ 60 Hz YUV 4:4:4, making it perfect for any type of play.

Moreover, the audio de-embedded to analog and coaxial audio is supported from 8 HDMI® output ports, and the device features an HDMI® output ARC function. This enables ARC audio from HDMI® display devices to be extracted to coaxial audio output. Each HDMI® output also supports the 4K2K to 1080p downscaler.

The device is easy to control using front panel buttons, IR remote, RS-232, LAN, and Web GUI.

FEATURES

- HDMI 2.0b, HDCP 2.2, and HDCP 1.4 compliant
- Up to 4K2K @ 60 Hz (YUV 4:4:4) of video resolution supported on all HDMI ports
- 18 Gbps Video Bandwidth
- Dolby Vision, HDR10+, and HLG
- 4K->1080p Down Scaler for each output
- Up to 7.1CH HD audio (LPCM, Dolby TrueHD™, and DTS-HD Master Audio) in audio pass-through
- Audio de-embedded supported via analog and coax ports
- ARC, CEC, and smart EDID management are supported
- 1U rack-mounted design with front panel OLED display
- Easy Control through front panel buttons, IR remote, RS-232, LAN, and Web GUI

PACKAGE CONTENTS

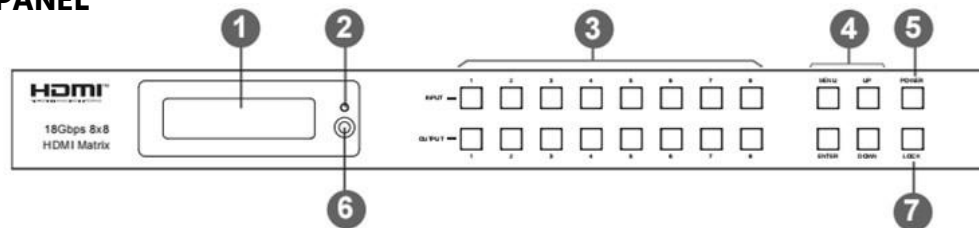
Take an inventory of the package contents to make sure you have all the items listed below.

Please contact Monoprice Customer Service for a replacement if anything is missing or damaged.

- **1x** 4K 8 × 8 HDMI® Matrix
- **1x** IR Remote Control
- **1x** IR Receiver Cable (1.5 meters)
- **1x** 12V/5A Power Adapter
- **1x** RS-232 Serial Cable (1.5 m, male to female head)
- **2x** Mounting Ear
- **1x** User Manual

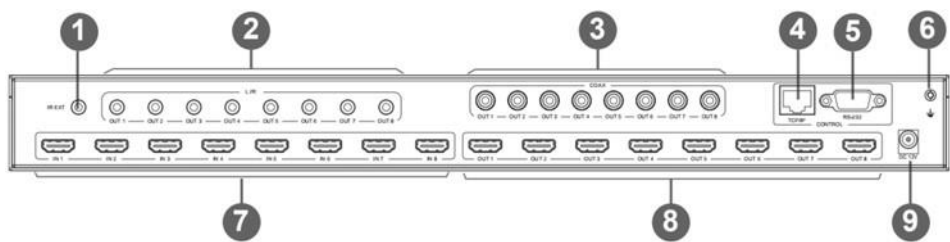
PRODUCT OVERVIEW

A. FRONT PANEL



1	OLED SCREEN	Display matrix switching status, input/output port, EDID, Baud rate, and IP Address.
2	POWER LED	The LED will illuminate in green when the product is connected to the power supply, and red when the product is on standby.
3	INPUT/OUTPUT BUTTONS	To pair an output and input, first press the desired output button, then press the input button. The output is now tied to that Input until you change it. The input can be simultaneously sent to other outputs using the same procedure.
4	MENU/ENTER/UP/DOWN	EDID Check: On the initial OLED display screen, press the "MENU" button to enter the Matrix switching state interface, then press the "UP/DOWN" button to check the current EDID information of each HDMI input port. EDID Setting: On the initial OLED display screen, press the "MENU" button to enter the EDID setting interface, press the "UP/DOWN" button to select the required EDID, and press the "ENTER" button. A prompt "copy to input:" will appear. Then press the "UP/DOWN" button to select the input port you need to set and press the "ENTER" button again to confirm. Baud Rate Setting: On the initial OLED display screen, press the "MENU" button to enter the Baud rate interface, press the "UP/DOWN" button to select the required Baud rate, and finally press the "ENTER" button to confirm the setting. IP Address Check: On the initial OLED display screen, press the "MENU" button to enter the IP interface, then press the "UP/DOWN" button to check the current IP address. Pressing the "MENU" button again will return to the initial OLED display status.
5	POWER BUTTON	Long press the POWER button for 3 seconds to enter the standby mode, then short press it to wake up the device.
6	IR WINDOW	IR receiver window only receives the IR remote signal from this product.
7	LOCK BUTTON	Short press the LOCK button to lock the front panel buttons (Except the power button); Press it again to unlock

B. REAR PANEL



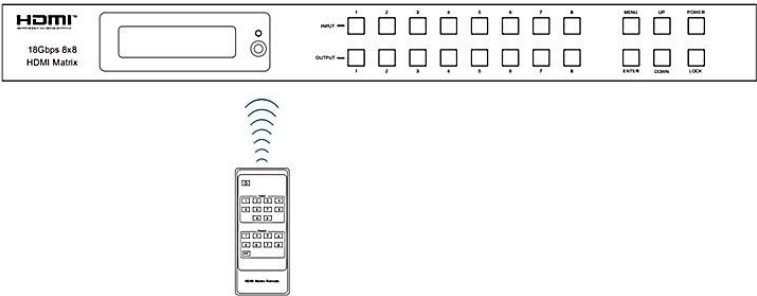
1	IR EXT	If the IR receiver window of the unit is blocked or the unit is installed in a closed area out of the infrared line of sight, the IR receiver cable can be inserted into the “IR EXT” port to receive the IR remote signal.
2	L/R OUT (1-8)	Analog audio output port, connect to an amplifier or speaker via a 3.5mm audio cable.
3	COAX OUT (1-8)	The coaxial audio output port connects to the audio output device such as an audio amplifier via a coaxial cable.
4	TCP/IP PORT	TCP/IP control port, connect to PC or router with an RJ45 cable.
5	RS-232 PORT	Connect to a PC or control system by D-Sub 9-pin cable to transmit RS-232 command.
6	GND	Connect the housing to the ground.
7	INPUT PORTS (18)	HDMI input ports, connect to the HDMI source device such as a DVD or set-top box with an HDMI cable.
8	OUTPUT PORTS (1-8)	HDMI output ports, connect to the HDMI display device such as a TV or monitor with an HDMI cable.
9	DC 12V	Connect to 12V/5A power adapter.

C. IR REMOTE CONTROL

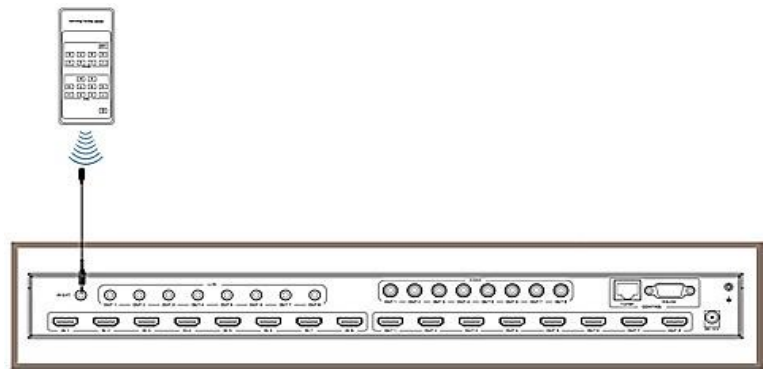
1	POWER ON / STANDBY	Power on the Matrix or set it to standby mode.
2	INPUT 1/2/3/4/5/6/7/8	Select the input source button or select the last or next input source button.
3	OUTPUT 1/2/3/4/5/6/7/8	Select the output source button. All: Select all output sources simultaneously. For example, when you press the “All” button and then press the input “1” button, at this time the input “1” source will output to all display devices.

The Matrix can be selected through the input and output source by using the IR remote. There are two ways to receive the IR remote signal.

Method 1: The IR window accepts the IR remote signal. When using the IR remote, the furthest distance is 7 meters and the angle is ± 45°. The diagram is on the right.



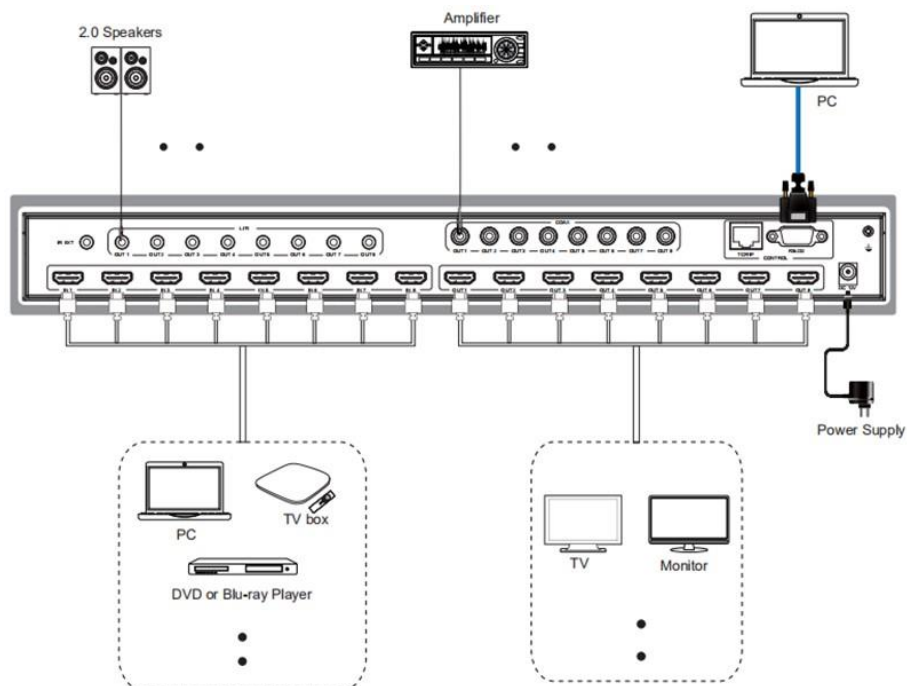
Method 2: If the IR receiver window of the Matrix is blocked or the Matrix is installed in a closed area out of the infrared line of sight, the IR receiver cable can be inserted into the “IR EXT” port to receive the IR remote signal. The furthest distance for using the IR remote is 7 meters and the IR remote is directly facing the IR receiver head. The diagram is on the right.



IR CABLE PIN ASSIGNMENT



CONNECTION DIAGRAM



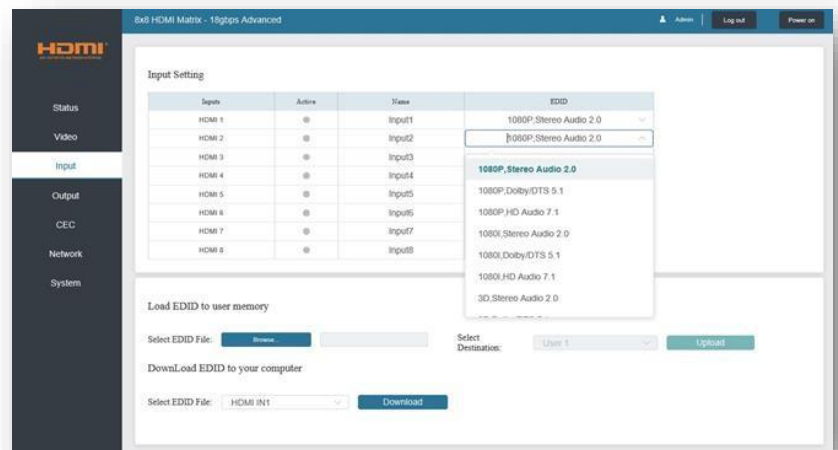
EDID MANAGEMENT

This Matrix has 21 factory-defined EDID settings, 2 user-defined EDID modes, and 8 copy EDID modes. You can select the defined EDID mode or copy EDID mode to the input port through front panel buttons, RS-232 control, or Web GUI.

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

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

Web GUI Operation: Please check the EDID management in the “Input page” of “Web GUI User Guide”.



The defined EDID setting list of the product is shown 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, 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, 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, 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 6
30	Copy from HDMI output 7
31	Copy from HDMI output 8

WEB GUI USER GUIDE

The Matrix can be controlled by Web GUI. The operation method is shown 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:

Method 1: You can get the IP address via panel buttons. On the initial OLED display, press the "MENU" button to enter the IP interface, then press the "UP/DOWN" button to check the current IP address.

Method 2: You can get the IP address via the RS-232 control. Send the command "r ipconfig!" through an ASCII Command tool, then you'll get the feedback information as shown below:

IP:192.168.62.109 in the figure on the right 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 "RS-232 Control Command".

STEP 2:

Connect the TCP/IP port of the Matrix to a PC with a UTP cable, and set the PC's IP address to be in the same network segment as the Matrix.

```
IP Mode: DHCP
IP:192.168.62.109
Subnet Mask:255.255.255.0
Gateway:192.168.62.1
TCP/IP port:8000
Telnet port:23
Mac address:6c-df-fb-0c-b3-8e
```

STEP 3:

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



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



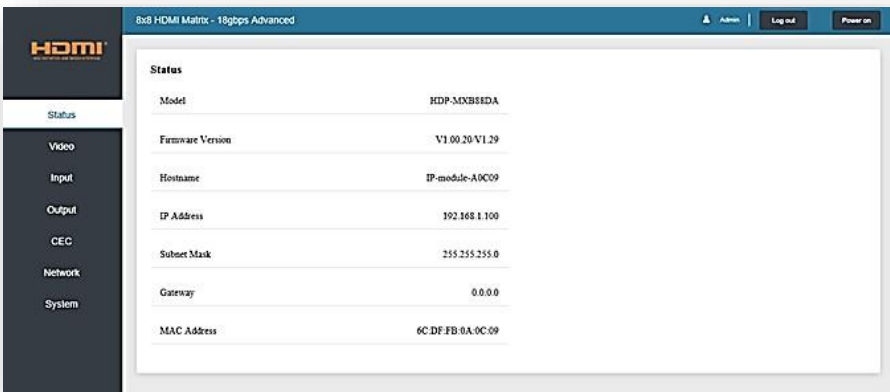
Select the Username from the list and enter the password. The default passwords are:

Username:	User	Admin
Password:	user	admin

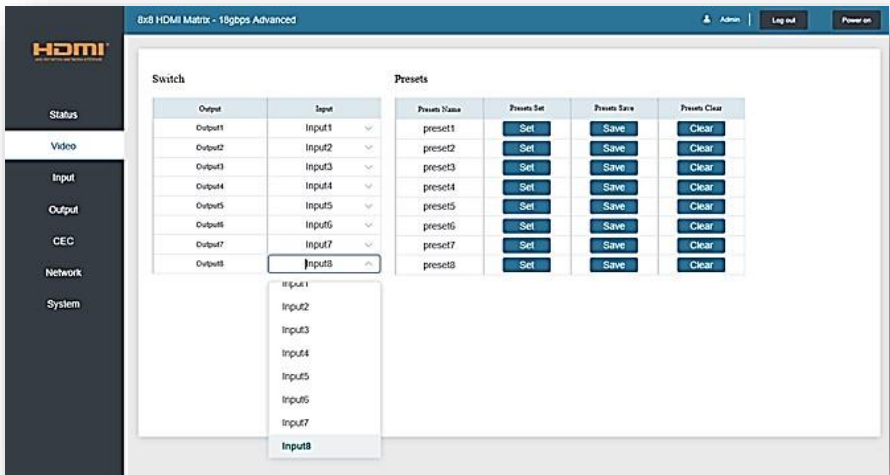
After entering the password, click the “LOGIN” button and the following Status page will appear.

STATUS PAGE

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



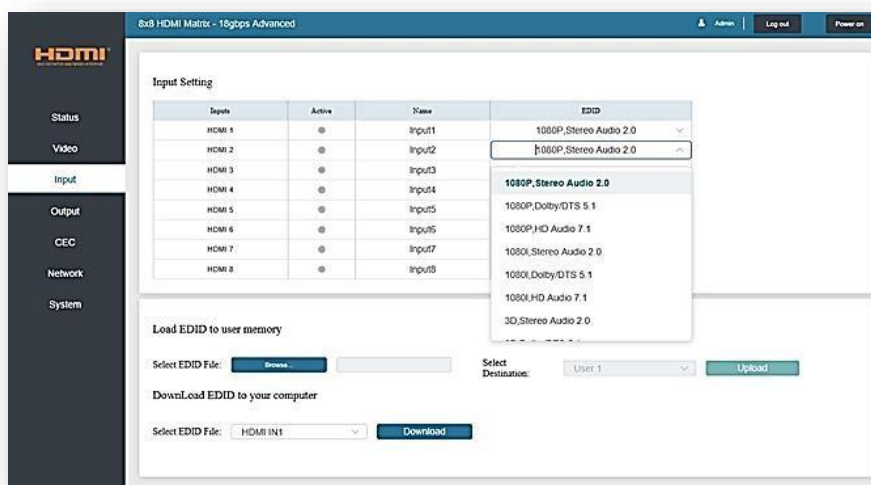
VIDEO PAGE



You can do the following operations on the Video page:

1. Output: The current device's OUTPUT port. You can select a signal source for it.
2. Input: You can click the drop-down menu to select the signal source for the corresponding OUTPUT port.
3. Presets Name: You can name the current scene with a maximum length of 12 characters (Chinese name is unsupported).
4. Presets Set: You can restore the settings of the last saved audio-video matrix switching relationship.
5. Presets Save: You can save the audio-video matrix switching relationship.
6. 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.
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.
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 figure on the right:

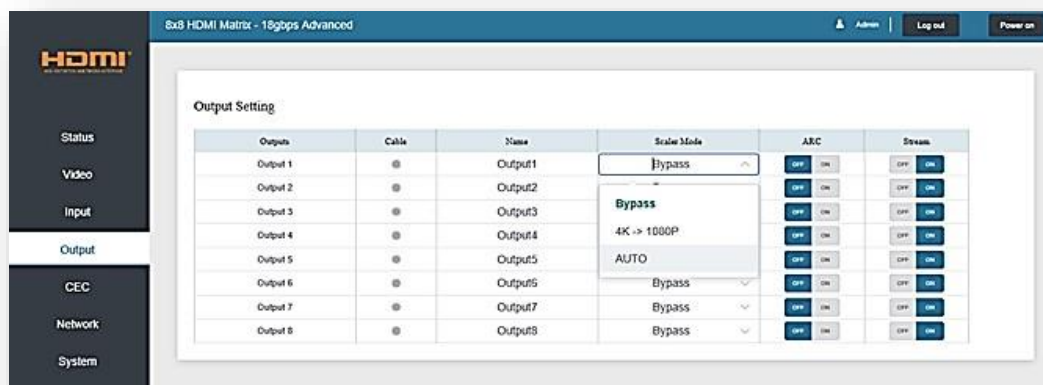


Make sure to select the correct file, then you can check the name of the selected file. Select “User 1” or “User 2”, then click “Upload”. After successful setting, it will prompt as successful.



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

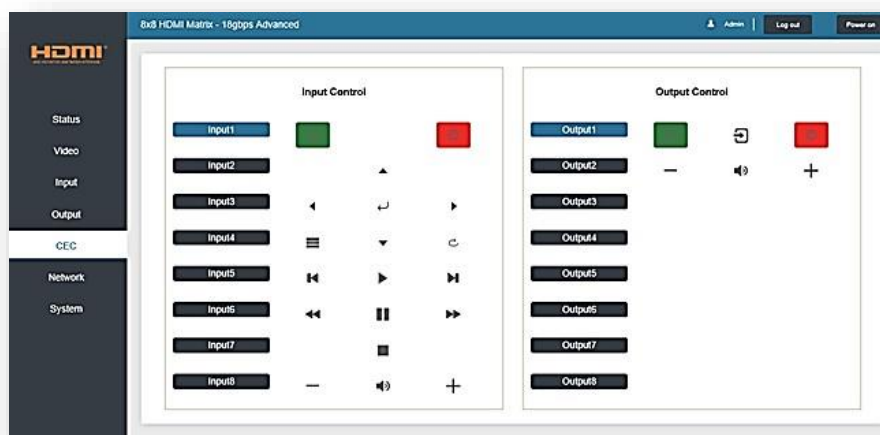
OUTPUT PAGE



You can do the following operations on the Output page:

1. **Outputs:** Output channel of the device.
2. **Name:** The current output channel’s name. You can modify it by entering the corresponding name (max length: 12 characters) in the input box.
3. **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.
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



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 +/-, and active source switching.

NETWORK PAGE

The screenshot shows the 'Network' settings page for the 'HDMI Matrix - 18Gbps Advanced' device. The left sidebar contains navigation links: Status, Video, Input, Output, CEC, Network (selected), and System. The main content area is divided into two sections: 'IP Settings' and 'Web Login Settings'. In the 'IP Settings' section, the 'Static' tab is active, displaying fields for IP Address (192.168.1.100), Gateway (0.0.0.0), Subnet Mask (255.255.255.0), and Telnet Port (23). In the 'Web Login Settings' section, the 'Admin' tab is active, showing fields for Old Password, New Password, Confirm Password, and Product Model (HDP-MXB88DA). At the bottom of the page, there are buttons for 'Set Network Defaults' and 'Save'.

SET THE DEFAULT NETWORK

Click “Set Network Defaults”, and there will be a prompt as shown in the following figure:

Click “OK” to search the IP Address again, as shown in the figure below:



The screenshot shows the same 'Network' settings page as before, but it is dimmed. In the center of the 'Web Login Settings' section, there is a green message that says "Searching IP!". The 'Set Network Defaults' and 'Save' buttons are still visible at the bottom.

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 figure on the right:



Note: Input rules for changing passwords:

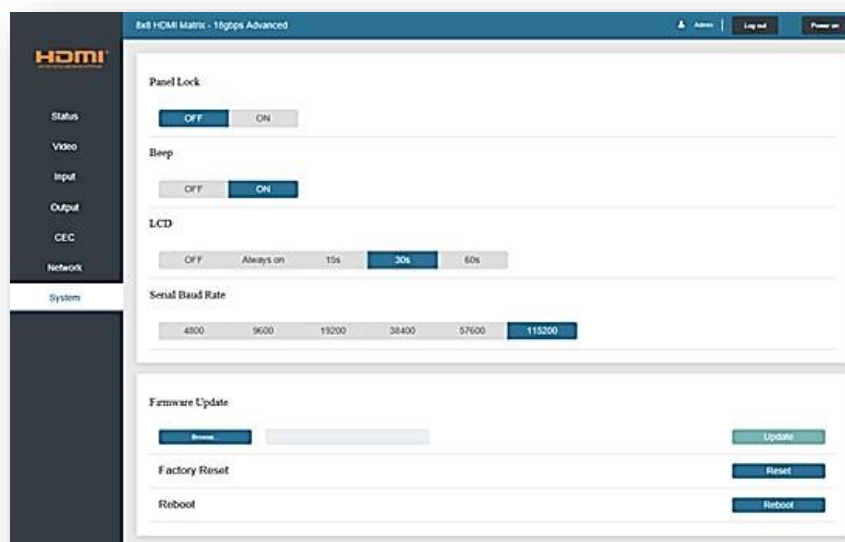
1. The password can't be empty.
2. The new Password can't be the same as old Password.
3. New Password and Confirm Password must be the same.

MODIFY NETWORK SETTING

Modify the Mode/IP Address/Gateway/Subnet Mask/Telnet Port as required, click "Save" to save the settings, and 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.



SYSTEM PAGE



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 the 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.

RS-232 CONTROL Command

The product also supports RS-232 control. You need a serial cable with an RS232 male head and a 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.



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

ASCII Commands				
Serial port protocol. Baud rate: 115200, Data bits: 8bit, stop bits:1, Check bit: 0				
x - Parameter 1; y - Parameter 2; ! - Delimiter				
Command Code	Function Description	Example	Feedback	Default
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! power off	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-MXB88DA	
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=0~8(0=all)	r link in 1!	hdmi input 1: connect	
r link out y!	Get the connection status of the y output port, y=0~8(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	
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	
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	
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	
s logo1 ***** ***!	Set the logo name displayed on the first line of LCD screen, the max character is 16	s logo1 Initializing ...!	logo1: Initializing...	
s logo2 ***** ***!	Set the logo name displayed on the second line of LCD screen, the max character is 16	s logo2 HDPMXB88DA!	logo2 HDPMXB88DA!	
s baud rate xxx!	Set the serial port baud rate of RS02 module, z=(115200,57600,38400,19200,9600,4800)	s baud rate 115200!	Baudrate:11520 0	115200
r baud rate!	Get the serial port baud rate of RS02 module	r baud rate!	Baudrate:11520 0	
s id z!	Set the control ID of the product, z=000~999	s id 888!	id 888!	0
OUTPUT SETTING				
s in x av out y!	Set input x to output y, x=1~8, y=0~8(0=all)	s in 1 av out 2!	input 1 -> output 2	
r av out y!	Get output y signal status y=0~8(0=all)	r av out 0!	input 1 -> output 1 input 2 -> output 2 input 8 -> output 8	

s hdmi y stream z!	Set output y stream on/off, y=0~8 (0=all) 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	
r hdmi y stream!	Get output y stream status, y=0~8(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=0~8(0=all), z=1~3(1=bypass,2=4 k->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
r hdmi y scaler!	Get hdmi output y port output mode y=0~8(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=0~8(0=all),z=1~31 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,Stereo Audio 2.0 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,	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

	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 7.1 HDR 22, User1 23, User2 24~31, copy from hdmi output 1~8			
r edid in x!	Get EDID status of the input x, x=0~8(0=all input)	r edid in 0!	input 1 EDID: 4K2K60 _444, Stereo Audio 2.0 input 8 EDID: 4K2K60_444, Stereo Audio 2.0	
r edid data hdmi y!	Get the EDID data of the hdmi output y port, y=1~8	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=0~8(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	off
r hdmi y arc!	Get the ARC state of HDMI output y, y=0~8(0=all)	r hdmi 1 arc!	hdmi output 1 arc on	
CEC SETTING				
s cec in x on!	set input x power on by CEC, x=0~8(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=0~8(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=0~8(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=0~8(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=0~8(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=0~8(0=all input)	s cec in 1 down!	input 1 menu down	

s cec in x left!	set input x menu left operation by CEC, x=0~8(0=all input)	s cec in 1 left!	operation	
s cec in x right!	set input x menu right operation by CEC, x=0~8(0=all input)	s cec in 1 right!	input 1 menu left operation	
s cec in x enter!	set input x menu enter by CEC, x=0~8(0=all input)	s cec in 1 enter!	input 1 menu enter operation	
s cec in x play!	set input x play by CEC, x=0~8(0=all input)	s cec in 1 play!	input 1 play operation	
s cec in x pause!	set input x pause by CEC, x=0~8(0=all input)	s cec in 1 pause!	input 1 pause operation	
s cec in x stop!	set input x stop by CEC, x=0~8(0=all input)	s cec in 1 stop!	input 1 stop operation	
s cec in x rew!	set input x rewind by CEC, x=0~8(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=0~8(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=0~8(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=0~8(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=0~8(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=0~8(0=all input)	s cec in 1 previous!	input 1 previous operation	
s cec in x next!	set input x next by CEC, x=0~8(0=all input)	s cec in 1 next!	input 1 next operation	
s cec hdmi out y on!	set output y power on by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power on	
s cec hdmi out y off	set output y power off by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power off	
s cec hdmi out y mute!	set output y volume mute by CEC, y=0~8(0=all output)	s cec hdmi out 1 mute!	hdmi output 1 volume mute	
s cec hdmi out y vol-!	set output y volume down by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol-!	hdmi output 1 volume down	
s cec hdmi out y vol+!	set output y volume up by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol+!	hdmi output 1 volume up	
s cec hdmi out y active!	set output y active source by CEC, y=0~8(0=all output)	s cec hdmi out 1 active!	hdmi output 1 active source	
NETWORK SETTING				
s ip addr xxx.xxx.xxx.x xx!	Set the network IP address	s ip addr 192.168.1.10 0!	Set IP address: 192.168.1.100 (Please use "s net reboot!" command or repower the device to apply the new config!) DHCP on, Device can't config static address, set DHCP off first.	

r ip addr!	Get the network IP address	r ip addr!	IP address: 192.168.1.100	
s subnet xxx.xxx.xxx.x xx!	Set the network subnet mask	s subnet 255.255.25 5.0!	Set subnet Mask: 255.255.255.0 (Please use "s net reboot!" command or repower the device to apply the 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.x xx!	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 the new config! DHCP on, The 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	
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	

TECHNICAL SPECIFICATION

Model	44557
TECHNICAL	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	18 Gbps
Video Resolution	Up to 4K2K @ 50/60 Hz (4:4:4)
Color Space	RGB, YCbCr 4:4:4/4:2:2/4:2:0
Color Depth	8-bit, 10-bit, 12-bit
HDMI Audio Formats (Passthrough)	LPCM 2/5.1/7.1, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Coax Audio Formats	LPCM 2.0, Dolby Digital / Plus, DTS 5.1
L/R Audio Formats	PCM2.0
HDR formats	HDR10, HDR10+, Dolby Vision, HLG
ESD Protection	Human-body Model: ±8kV (Air-gap discharge), ±4kV (Contact discharge)

CONNECTION			
Input Ports	8x HDMI Type A [19-pin female] 1x IR EXT [3.5 mm Stereo Mini-jack]		
Output Ports	8x HDMI Type A [19-pin female] 8x Coax Audio (RCA) 8x L/R Audio [3. 5mm Stereo Mini-jack]		
Control Ports	1x TCP/IP [RJ45] 1x RS-232 [D-Sub 9]		
MECHANICAL			
Housing	Metal Enclosure		
Color	Black		
Dimensions (W × D × H)	440 mm × 200 mm × 44.5 mm		
Weight	2.8 kg		
Power Supply	Input: AC 100 - 240V 50/60 Hz Output: DC 12V/5A (US/EU standard, CE/FCC/UL certified)		
Power Consumption	43W		
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 a “Premium High-Speed HDMI” cable is highly recommended.			

CUSTOMER SERVICE

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To download the latest drivers, firmware, manuals, etc., go to **www.monoprice.com** and type **44557** into the search bar. If available, support files are linked at the bottom of the product page.

REGULATORY COMPLIANCE

NOTICE FOR FCC

 This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTICE FOR ISED CANADA

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

DISPOSAL AND RECYCLING INFORMATION



The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electrical and electronic products via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your unwanted product, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

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