# MONOPRICE

## Blackbird<sup>™</sup> 4K 4x4 HDMI<sup>®</sup> Matrix

P/N 24179

**User's Manual** 

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## SAFETY WARNINGS AND GUIDELINES

Please read this entire manual before using this device, 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 of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- This device ventilates excessive heat through the slots and openings in the case. Do not block or cover these openings. Ensure that the device is in an open area where it can get sufficient airflow to keep from overheating.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- Prior to 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 device 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 the unit by pulling on the power cord. Always grasp the connector head or adapter body.

- Ensure that power is turned off and disconnected before making any electrical connections.
- Remove the batteries from the controller if it will go unused for a lengthy period of time.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user serviceable parts. Do not attempt to open, service, or modify this device.

#### INTRODUCTION

Thank you for purchasing this Blackbird<sup>™</sup> 4K 4x4 HDMI<sup>®</sup> Matrix Switch! This matrix allows you to independently distribute any of four HDMI inputs to any of four displays. It includes an IR remote control and allows for front panel, IR, RS232, and TCP/IP control using the web-based GUI. The LCD screen on the front panel shows the real-time connection status. Rear panel DIP switches allow for manual control of the EDID information sent to the source devices. It features a maximum video resolution of 4K@60Hz 4:4:4, including 1080p 3D video. It is fully compliant with the HDMI 2.0 and HDCP 2.2 standards.

### **FEATURES**

- Independently distributes any of four HDMI<sup>®</sup> sources to any of four HDMI displays
- Includes four digital coaxial S/PDIF outputs
- Supports video resolutions up to 4K@60Hz 4:4:4, including 1080p 3D video
- Includes an IR remote control and allows for front panel, IR, RS232, and TCP/IP control using the web-based GUI
- Features DIP switches for manual EDID management
- Front panel LCD screen shows real-time connection information

## **CUSTOMER SERVICE**

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website **www.monoprice.com** during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at **support@monoprice.com** 

## PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

1x 4K 4x4 HDMI<sup>®</sup> matrix
1x IR remote control
1x IR receiver
1x RS232 cable (3-pin to DB9)
2x Mounting brackets
6x Mounting screws
4x Plastic feet
1x AC power adapter (24 VDC, 1.25A)
1x User's manual

## **PRODUCT OVERVIEW**

#### **Front Panel**



- 1. FIRMWARE: Micro USB port for performing firmware updates.
- 2. **POWER LED:** The LED illuminates red when power is on. It illuminates green when in standby mode and flashes red when upgrading the firmware.
- 3. IR: IR "eye" for receiving signals from the included IR remote control.
- 4. SYSTEM MONITOR: LCD screen displays the real-time connection status.
- 5. **INPUTS:** Four buttons for selecting the input source.
- 6. **OUTPUTS:** Four buttons for selecting the output channel.



#### **Rear Panel**

- 1. **INPUTS:** Four HDMI<sup>®</sup> jacks for connecting the source devices.
- 2. **OUTPUTS:** Four HDMI jacks for connecting the displays and four digital coaxial S/PDIF jacks for connecting an external amplifier or receiver.
- 3. **CONTROL:** DIP switches for setting manual **EDID** management. RS232 connector for connecting to a computer for **RS232** control. 3.5mm **IR IN** jack for connecting the included IR receiver. RJ45 jack for **TCP/IP** control using the built-in web-based GUI.
- 4. **DC 24V:** DC barrel connector for connecting the included AC power adapter.

5. **GROUND:** Ground connection.

#### **Remote Control**

- 1. **STANDBY:** Press the button to power the matrix on or to put it into standby.
- 2. INPUTS: Four numbered buttons for selecting the input source.
- 3. **OUTPUTS:** Four numbered buttons for selecting the output channel.
- 4. **MENU:** ALL button for selecting all inputs or outputs. EDID button for EDID management. CLEAR button for canceling an operation. ENTER button for confirming the operation.



#### HDMI Audio RS232: Ethernet: IR Control: Õ 🕽 0 . 0 0\*\* 0\* 11111 $\bigcirc$ D MUH44A-H2 DVD PS4 Laptop HDTV Router

#### SAMPLE CONNECTION DIAGRAM

## INSTALLATION

Perform the following steps to install your matrix:

- 1. Ensure that all equipment to be connected is powered off and unplugged from its power source.
- 2. Place or mount the matrix in its intended location. Use the included mounting brackets or plastic feet, as desired.
- 3. Using a High Speed HDMI<sup>®</sup> Cable (not included), plug one end into the HDMI input on one of your displays, then plug the other end into one of the **OUTPUTS** on the matrix. Repeat for the other three displays.
- 4. (Optional) Using a digital coaxial S/PDIF cable (not included), plug one end into the digital coaxial input on your external amplifier or receiver, then plug the other end into the **SPDIF** output on the matrix. Repeat for the other three SPDIF connections, as desired.
- 5. Using a High Speed HDMI Cable (not included), plug one end into one of the **INPUTS** on the matrix, then plug the other end into the HDMI output on one of your source devices. Repeat for the other three source devices.
- 6. (Optional) If the IR "eye" on the front panel will be obstructed, plug the included IR receiver into the IR IN jack on the matrix, then position the IR "eye" where it can receive signals from the included IR remote control.
- (Optional) If you will be controlling the matrix using a third party RS232 control software (not included) on your PC, plug the included RS232 cable into the RS232 connector on the matrix, then plug the other end into a serial port on your computer.
- 8. (Optional) If you will be controlling the matrix using the built-in web GUI, plug one end of an Ethernet cable (not included) into the **TCPIP** jack on the matrix, then plug the other end into either an Ethernet router or switch in your existing network (recommended) or directly into the Ethernet jack on your PC (not recommended).
- 9. Plug the DC barrel connector on the included AC power adapter into the **DC 24V** jack on the matrix, then plug the adapter into a nearby AC power adapter. The

**POWER LED** on the front panel will illuminate green, indicating that the matrix is in standby mode.

- 10. (Optional) Determine the maximum resolution and audio capabilities of your least capable display (the one with the lowest resolution and fewest audio channels), then set the DIP switches on the rear panel to the appropriate positions for the video and audio capabilities. See the *EDID MANAGEMENT* section for details on how to set the DIP switches.
- 11. Plug in and power on all connected equipment. Start video playback on each source device and verify that the video can be seen on each display. Use the IR remote control to verify that you can switch each output to view the video from each input. Refer to the *OPERATION* section for operating instructions.

Congratulations, your new matrix is now installed and ready for normal operation.

## CONNECTION STATUS

Press any of the four **OUTPUTS** buttons on the front panel. The LED for the connected **INPUT** will briefly illuminate.

## CONFIGURING FOR DIRECT TCP/IP CONTROL

If you connected the matrix to an Ethernet switch or router, there is nothing special that needs to be done for TCP/IP control. Refer to either the *TCP/IP Software Control* or *TCP/IP GUI Control* portions of the *OPERATION* section below for connection and operation details.

However, if you connected the matrix directly to the Ethernet jack on your PC, you will need to configure it to communicate with the matrix. Perform the following steps to change the network connection settings:

- 1. Open Control Panel.
- 2. Click the **Network and Internet** option.
- 3. Click the View network status and tasks link.

- 4. Click the **Change adapter settings** link.
- 5. Right click the Local Area Connection icon and select Properties from the menu.
- 6. Left click the **Internet Protocol Version 4 (TCP/IPv4**) entry, then click the **Properties** button.
- 7. Click the radio button next to the **Use the following IP address:** entry, then input the following:

IP Address:	192.168.0.178
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.0.1
	-

eneral	
'ou can get IP settings assigned his capability. Otherwise, you ne or the appropriate IP settings.	automatically if your network supports ed to ask your network administrator
Obtain an IP address autom	atically
Ose the following IP address	
IP address:	192.168.0.178
Subnet mask:	255.255.255.0
Default gateway:	192.168.0.1
Obtain DNS server address	automatically
O Use the following DNS serve	r addresses:
Preferred DNS server:	
Alternate DNS server:	• • •
Validate settings upon exit	Advanced

8. Click the **OK** button to close the **TCP/IPv4 Properties** dialog, then click the **Close** button to close the **Local Area Connection Properties** dialog.

## EDID MANAGEMENT

The DIP switches on the rear panel allow you to set the EDID information that is passed to the source devices. Use the following table to determine the settings for the DIP switches for specific video resolution and audio capabilities. When in the down position, each switch represents a 0, while putting the switch in the up position represents a 1.

#	Switch	Video	Audio
0	0000	Pass-through (default)	
1	0001	720p 2D	Pass-through
2	0010	720p 3D	Pass-through
3	0011	1080p 2D	Pass-through
4	0100	1080p 3D	Pass-through
5	0101	4K@30Hz	Pass-through
6	0110	4K@30Hz	2-channel
7	0111	4K@30Hz	7.1-channel
8	1000	4K@60Hz 4:2:0	Pass-through
9	1001	4K@60Hz 4:2:0	7.1-channel
10	1010	4K@60Hz 4:4:4	Pass-through
11	1011	4K@60Hz 4:4:4	7.1-channel
	1111	Enable soft	ware EDID
		management (RS232 or TCPIP)	



## **OPERATION**

#### Front Panel

Perform the following steps to connect an input to one or more outputs.

- 1. Press the **INPUTS** button corresponding to the desired source device.
- 2. Press one or more of the **OUTPUTS** buttons, corresponding to the display(s) on which you want to view the selected input.
- 3. The LED corresponding to the buttons pressed will blink three times if the operation was successful. If not, the LEDs will remain off.

Examples:

- To connect input 1 to output 3, press the INPUTS 1 button, then press the OUTPUTS 3 button.
- To connect input 2 to both output 2 and output 4, press the **INPUTS 2** button, then press the **OUTPUTS 2** button, followed by the **OUTPUTS 4** button.

#### **IR Remote Control**

Perform the following steps to direct one of the inputs to one or more outputs.

- 1. Press the numbered button in the **INPUTS** section of the remote control corresponding to the desired source device.
- Press one or more numbered buttons in the OUTPUTS section corresponding to the display on which you want to view the selected input. Alternatively, press the ALL button if you want to view the selected input on all output displays.
- 3. Press the ENTER button in the MENU section to confirm the operation. Alternatively, press the CLEAR button in the MENU section if you want to cancel the operation.



Examples:

- To connect input 1 to output 3, press the 1 button in the **INPUTS** section, then press the **3** button in the **OUTPUTS** section, and finally press the **ENTER** button.
- To connect input 2 to both output 2 and output 4, press the 2 button in the INPUTS section, then press both the 2 and 4 buttons in the OUTPUTS section, and finally press the ENTER button in the MENU section.

Perform the following steps to manage the EDID settings for one or more inputs.

- 1. Press the **EDID** button in the **MENU** section.
- Press one of the numbered buttons in the INPUTS section corresponding to the source device you want to send the EDID information. Alternatively, press the ALL button in the MENU section if you want to send the EDID information to all the source devices.
- 3. Press the numbered button in the **OUTPUTS** section corresponding to the display whose EDID settings you want to send to the selected source devices.
- 4. Press the ENTER button in the MENU section to confirm the operation. Alternatively, press the CLEAR button in the MENU section to cancel the operation.

#### Examples:

- To send the EDID information from display 3 to input 1, press the EDID button in the MENU section, then press the 1 button in the INPUTS section, then press the 3 button in the OUTPUTS section, and finally press the ENTER button in the MENU section.
- To send the EDID information from display 4 to all the inputs, press the EDID button in the MENU section, then press the ALL button in the MENU section, then press the 4 button in the OUTPUTS section, and finally press the ENTER button in the MENU section.

#### RS232 Control

For RS232 control you will need to connect your PC to the matrix using the included RS232 cable. You will also need to use a third party RS232 control software, such as CommWatch (not included). The following image shows the basic interface of CommWatch.

Parameter Con	figuration		
JUANI (Se-1alPort)	Test Tool (¥1.	0) HTTP://WWW.SL.COM.CN	
PORT Com1 ▼ BaudRa 9600 ▼ Parity pNone ▼ Byte 8 ▼ Stop 1 ▼	-		
Reset      Clear      Save To File	$\leq$	Monitoring area, indicates whether the command sent works.	
Hex View Stop View Auto Clear View New Line			
Hex Send Mode	S		
Auto Send Interval 1000 ms Counter Reset	Load File Clear	Command Sending	area

Use the following communications parameters:

Baud Rate:	9600
Data Bits:	8
Stop Bits:	1
Parity:	none

To allow for RS232 control, you must set the EDID DIP switches on the rear panel to 1111. The matrix responds to the commands contained in the following table. Note that the braces in the following commands (i.e., [ and ]) are not part of the commands and are used only for clarity. The other punctuation marks ARE part of the commands.

System Commands		
Command	Function	Feedback Example
/*Type;	Query the model	XXXXX
/^Version;	Query the firmware version	VX.X.X
		Demo Mode
	Puts the matrix in "demo" mode,	AV:01->01
	which switches the inputs and	AV:01->02
2	outputs every 2 seconds. After	AV:01->03
Demo.	switching through all inputs and	AV:01->04
	outputs, the matrix will return	AV:02->02
	to normal operation mode.	
		Normal Mode
Undo.	Cancels the current operation	Undo OK!
PWON.	Turns the matrix on	PWON
	Puts the matrix into standby	
PWOFF.	mode. Send the PWON	PWOFF.
	command to turn the matrix on.	
	Puts the matrix in standby	
STANDBY.	mode. Press any button to turn	STANDBY
	the matrix on.	
	Query the new or status	STANDBY, PWOFF, or
89962.	Query the power status	PWON
89964.	Query the IP address	IP:XXX.XXX.XXX
<u>0011</u>	Reset the matrix to the factory	Factory Default
202TT.	defaults	

Lock/Unlock Commands		
Command	Function	Feedback Example
/%Lock;	Lock the front panel buttons	System Locked!
/%Unlock;	Unlock the front panel buttons	System Unlock!
89961.	Query the system lock status	System Locked! or Unlock!

Switching Commands		
Command	Function	Feedback Example
[x]All.	Connect input [x] to all output channels	X To All. (X=01~04)
All#.	Connect each input to the corresponding output channel, i.e., 1->1, 2->2, etc.	All Through.
All\$.	Switch off all output channels	All Closed.
[x]#.	Connect input [x] to output [x}	X Through. (X=01~04)
[x]\$.	Switch off output [x]	X Closed. (X=01~04)
[x]0.	Switch on output [x]	X Open. (X-01~04)
AllQ	Switch on all output channels	All Open.
[x1]V[x2].	Connect input [x1] to one or several output [x2]. Separate multiple output channels with a comma.	AV:X1->X2 (X1/X2=01~04)
Status[x].	Query the connection status of output [x]	AV:Y->X (X/Y=01~04)

Switching Commands (continued)		
Command Function Feedback Exan		Feedback Example
		AV:01->01
Status	Query the connection status of	AV:01->02
Status.	each input and output channel	AV:01->03
		AV:01->04
%9971 <b>.</b>	Query the connection status of	In 01 02 03 04
	the inputs	Connect Y Y Y Y
°0072	Query the connection status of	Out 01 02 03 04
89972.	the outputs	Connect Y Y Y Y
°.0075	Query the connection status of	In 01 02 03 04
39973.	the inputs and outputs	Out 04 04 04 04
		Resolution
		Out 1 1920x1080P
89976.	Query the output resolution	Out 2 1920x1080P
		Out 3 1920x1080P
		Out 4 1920x1080P

Scene Commands		
Command	Function	Feedback Example
Save[Y].	Save the current operation to the preset command [Y]	Save to FY (Y=1-10)
Recall[Y].	Recall the preset command [Y]	Recall From FY (Y=1-10)
Clear[Y].	Clear the preset command [Y]	Clear FY (Y=1-10)

HDCP Compliance		
Command	Function	Feedback Examples
/%[Y]/[X]:[Z].	HDCP management command. Y=output channel X=input port Y=1~4 or ALL) Z=HDCP status (1=compliant, 0=non-compliant)	/%Y/ALL:0.
%0801.	Auto HDCP management, activate carrier native mode	%0801
÷9973.	Query the HDCP status of the input signals	In 01 02 03 04 HDCP Y N Y N
89974.	Query the HDCP status of the output signals	Out         01         02         03         04           HDCP         Y         N         Y         N

EDID Commands						
(note that th	e DIP switches must be set to 1111 f	or these to work)				
Command	Command Function Feedback Examples					
EDIDH[x]B[y].	DIDH[x]B[y].Input port [y] learns the EDID from output port [x].DIDH[x]B[y].If the EDID data is available and the audio portion supports only PCM, then force-set it to support PCM mode only. If the EDID data is not available, then set it as initialized EDID data.					
EDIDPCM[x].	Set the audio for input port [x] to PCM	EDIDPCM[x]				

EDID Commands (continued)					
(note that the DIP switches must be set to 1111 for these to work)					
Command	Command Function				
EDIDG[x].	Get EDID data from output [x] and display the output port number	Hexadecimal EDID data and carriage return character			
EDIDMInit.	Restore the factory default EDID data for each input	EDIDMInit.			
EDIDM[X]B[Y].	Manual EDID switching. Enable input [Y] to learn the EDID data of output [X]. If the EDID data is not available, then set it as initialized EDID data.	EDIDM3B1			
EDID/[x][y].	Set the EDID data of input port [x] to built-in EDID # [y]. [y]=0~11 corresponding to the 12 embedded EDID settings. Refer to the <i>EDID MANAGEMENT</i> section above.	EDID/[x]/[y]			
EDIDUpgrade[x].	Upgrade EDID data through the RS232 connection. [x]=input port 1~4, 5=All input ports. When the switch receives the command, it will show a message to prompt you to send the EDID file (.bin file). The operation will be canceled after 10 seconds.	Please send the EDID file EDID Upgrade OK!			

EDID Commands (continued) (note that the DIP switches must be set to 1111 for these to work)				
Command Function Feedback Examples				
GetInPortEDID[X]	Get the EDID data of input [X]. [X]=1~4			
÷9979.	Get the DIP switch status	EDID RS232 GUI CONTROL 1111		

Digital Audio Commands				
Command	Feedback Example			
DigitAudioON[x].	Enable SPDIF audio output port [x]. [x]=1~4, 5=All ports	DigitAudio ON [x]/ALL Outputs		
DigitAudioOFF[x].	Disable SPDIF audio output port [x]. [x]=1~4, 5=All ports	DigitAudio OFF [x]/All Outputs		
89977 <b>.</b>	Query the status of digital audio for all output channels	Out 01 02 03 04 Audio Y Y Y Y		

#### TCP/IP Software Control

You can connect to the matrix using a third party TCP/IP control software program, such as TCPUDP (not included). Use the following settings to connect to the matrix:



#### TCP/IP GUI Control

You can use the built-in web based GUI to control the matrix. To do so, open your internet browser and type the following into the address bar:

#### 192.168.0.178

You will be presented with the GUI login screen, as shown below:

Please Enter	
Please Enter	
Login	

There are two sets of usernames and passwords you can use:

Username	Password
admin	admin
user	user

After typing in the username and password, click the **Login** button

Once you have logged in, you will see the **Scene** screen, as show below. This screen allows you to select and load a previously saved "scene". Each "scene" is a saved configuration preset. By default the matrix has no saved configuration presets.

s	cene Cu	ontrol				
	Scene 1	Scene 2	Scene 3	Scene 4	Scene 5	
	Scene 6	Scene 7	Scene 8	Scene 9	Scene 10	
			Load Cancel			

To load a "scene", click one of the **Scene** buttons, then click the **Load** button.

Click the **Control** tab to display the **Control** screen. This screen allows you to direct specific inputs to specific outputs and to save the result as a "scene".

Scene	Control			
	INPUT			
		All Con	firm Clear	
Ø				

To change a connection, first click one of the **INPUT** buttons, then click one of the **OUTPUT** buttons, and finally click the **Confirm** button.

If you want to direct the input to all outputs, first click one of the **INPUT** buttons, then click the **All** button, and finally click the **Confirm** button.

Click the **Clear** button at any time prior to clicking the **Confirm** button to cancel the change.

To save the current connection status as a "scene", first make the changes you want to make, then use the **Scene** drop-down list to select a scene number, and finally click the **Save** button.

-

Click the button to display the **Configuration / Embedded EDID** screen. This screen allows you to set the EDID data for each input.

Configuration	Status	Network	Password
•			
Input1 4	K@60Hz (4:4:4) 7.1CH ▼	Input2 720P 2D (pass th	rough CH)
Input3 7	20P 2D (pass through CH)	Input4 720P 2D (pass th	rough CH)
	Confirm	Cancel	
Ģ			

Use the drop-down lists next to each Input label to change the EDID for each specific input, then click the **Confirm** button to save your changes.

Click the **EDID Copy** radio button to display the **Configuration / EDID Copy** screen. This screen allows you to copy the EDID data from one of the OUTPUT channels to one or all of the INPUT devices.



To copy the EDID data, first click the radio button corresponding to the desired **OUTPUT**, then click the radio button corresponding to the desired **INPUT**, and finally click the **Confirm** button to make the change.

To copy the EDID data to all inputs, first click the radio button corresponding to the desired **OUTPUT**, then click the **To All Inputs** radio button in the center, then click the **Confirm** button.

Click the **Audio Out** radio button to display the **Configuration / Audio Out** settings screen. This screen allows you to enable or disable the S/PDIF outputs.



To enable or disable the S/PDIF audio output for any port, simply click the button to change the status to **ON** or **OFF**.

Click the **Status** tab to display the **Status / LCD** screen. This screen allows you to change the name and model that are displayed on the front panel LCD screen.

Configuration	Status	Netwo	rk	Password
	Name:	HDMI2.0 Switcher		
	Model:			
		Confirm Cancel		
Ģ				

To change the name and model, simply click inside the text box, type in the desired name and model, then click the **Confirm** button to save the changes.

Click the **Cancel** button at any time prior to clicking the **Confirm** button to cancel the change.

Click the **Button** radio button to display the **Status / Button** screen. This screen allows you to change the name that is displayed on the front panel LCD screen for each **INPUT** and **OUTPUT**.



To change the button names, simply click inside the text box, type in the desired name, then click the **Confirm** button to save the changes.

Click the **Scene** radio button to display the **Status / Scene** screen. This screen allows you to change the names shown on the front panel LCD screen for each custom "scene".



To change the scene names, simply click inside the text box, type in the desired name, then click the **Confirm** button to save the changes.

Click the **Network** tab to display the Network screen. This screen displays the MAC address, allows you to swap between DHCP and Static IP, and change the IP Address, Subnet Mask, and Gateway addresses.

Configuration	Status	Network	Password
	MAC address: 20-F4- DHC IP Address: 192 Subnet Mask: 255 Gateway: 192 Confir	IB-F8-B7-0F Static IP 168.0.178 255.255.0 188.0.1	
Ģ			

To change between DHCP and Static IP, click the button to toggle its position, then click the **Confirm** button to save the change.

To change the IP Address, Subnet Mask, or Gateway, click simply click inside the text box, type in the desired address, then click the **Confirm** button to save the change.

Click the **Password** tab to display the Password screen. This screen allows you to change the Admin and User passwords from their defaults of admin and user, respectively. It also displays the GUI and Hardware version numbers and allows you to lock or unlock the front panel controls.

Configuration	Status	Network	Password		
	Admin Password:	admin			
	User Password:	user			
		OFF			
	G Hardwa	0: V1.0.0 e: V1.0.0			
		Cancel			
Ģ					

To change a password, simply click inside the text box, type in the desired password, then click the **Save** button to save the change.

To lock or unlock the front panel control, click the **Front Panel** button to change the status to **OFF** or **ON**, as desired, then click the **Save** button to save the change.



## TCP/IP PORT CONFIGURATION

While you can change the IP Address, Subnet Mask, and Gateway addresses using the built-in GUI, you cannot make other network changes using the GUI. Instead, you need to use the built-in WebServer to configure the IP Port, reset the IP addresses to the factory default values, reset the password to the factory default, and update the firmware.

To access the WebServer, open your internet browser and type **192.168.0.178:100** into the address bar. If you changed the default IP address, use the new on instead. Use **admin** for both the Username and Password.

WEBSERVER		m) i)m) o) bility
open all   close all	Select Language English • Apply	
y web-server () Internet Settings () () Administration	Status Statistic Management	

To upgrade the GUI firmware, click the **Administration / Upload Program** option. Next, click the **Browse...** button and use the file browser to locate the update file. Finally, click the **Apply** button to perform the upgrade.

goahead WEBSERVER		m) i)m) o) bility-
open all   close all		
WAN     Administration     Upload Program	Update software program	
	Location:	浏览
	Apply	

### **USB FIRMWARE UPGRADE**

In the event that a firmware upgrade is made available, perform the following steps to upgrade the matrix.

- 1. Go to **Monoprice.com**, type **24179** into the search bar, then press the ENTER key or click the search icon.
- 2. Download the .zip file containing the firmware upgrade program.
- 3. Extract the .zip file to get the DfuSe Demonstration firmware upgrade program.

- 4. Download the .zip file containing the firmware upgrade file.
- 5. Extract the .zip file to get the **.dfu** firmware upgrade file.
- 6. Using a micro USB cable (not included), plug one end into one of your PC's USB ports, then plug the other end into the **FIRMWARE** port on the front panel.
- 7. Using the included IR remote control, put the matrix into **Standby** mode.
- 8. While pressing and holding the **INPUT 2** and **INPUT 3** buttons, use the remote control to power the matrix on. The **Power LED** will begin flashing red, indicating that the matrix is in firmware upgrade mode. If it does not, put the matrix back into standby mode and try again.
- 9. Double-click the **DfuSe Demonstration** icon to launch the firmware upgrade program.

🧼 DfuSe Demo (v3.0.0) 📃 🗖 🗶				
Available DFU and compatible HID Devices STM Device in DFU Mode				
✓ Supports ✓ Supports ✓ Can Enter DFV mode/1	Manifest Accelera HID detach Leave	ation ated Upload DFU mode	Vendor Procuct Version	Vendor 0483 Procuct DF11 Version 0200
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0 KB (0 Bytes) of 0 KB (0 Bytes)         Time duration         00:00:00         Choose         Upgrade         Verify				
Abort				Quit

- 10. Verify that the **Leave DFU mode** button is available. If not, your PC is not properly connected and you should repeat the process starting at step 6 above.
- 11. Click the **Choose...** button. Use the file browser to locate and select the **.dfu** firmware upgrade file.
- 12. Once the **.dfu** file is selected, the **Upgrade** button will be available. Click it to begin the firmware upgrade process.

#### **TECHNICAL SUPPORT**

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website **www.monoprice.com** during regular business hours, 7 days a week. You can also get assistance through email by sending a message to **tech@monoprice.com** 

## **SPECIFICATIONS**

Model	24179
Inputs	4x HDMI <sup>®</sup>
Outputs	4x HDMI, 4x S/PDIF Digital Coaxial Audio
Maximum Resolution	4K@60Hz 4:4:4
HDMI Version	2.0
HDCP Version	2.2
Control Options	Front panel buttons, IR remote control, RS232 software, TCP/IP GUI, TCP/IP software
Input Power	24 VDC, 1.25A
AC Adapter Input Power	100 ~ 240 VAC, 50/60 Hz
Maximum Power Consumption	14 watts
Operating Temperature	+14 ~ +131°F (-10 ~ +55°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions	17.2" x 9.3" x 1.7" (437 x 237 x 44 mm)
Weight	3.9 lbs. (1.75 kg)

## **REGULATORY COMPLIANCE**

Notice for FCC



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 into 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 Industry 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.

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