

# MONOPRICE

Blackbird™ 4K 8x8 HDBaseT™ Matrix with 7 Receivers



P/N 21819

**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.
- Ensure that power is turned off and disconnected before making any electrical connections.
- 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™ 4K 8x8 HDBaseT™ Matrix with 7 Receivers! It supports video resolutions up to 4K@60Hz and can transmit 4K video to distances up to 131 feet (40 meters) and 1080p video to distances up to 229 feet (70 meters) over a single Cat6 Ethernet cable. It supports bidirectional IR extension and IR, RS232, and TCP/IP control options. It supports the Power over Cable (PoC) feature, allowing the receivers to draw their power from the matrix/transmitter over the HDBaseT cable.

## FEATURES

- Supports HDMI® resolutions up to 4K@60Hz 4:2:0, including 1080p 3D video
- Fully compliant with the HDMI 1.4 and HDCP 1.4 specifications
- Can transmit 4K signals to distances up to 131 feet (40 meters) and 1080p signals to distances up to 229 feet (70 meters) over a single Cat6 Ethernet cable
- Features seven HDBaseT™ outputs and includes seven receivers
- Supports the Power over Cable (PoC) feature, allowing the receivers to draw their power from the matrix/transmitter over the HDBaseT™ cable
- Includes a local HDMI output with corresponding digital optical S/PDIF and stereo analog outputs
- Supports manual and automatic EDID management

## 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](http://www.monoprice.com) during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at [support@monoprice.com](mailto: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 Blackbird™ 4K 8x8 HDBaseT™ matrix
- 7x HDBaseT receivers
- 1x AC power cord
- 1x IR receiver
- 1x IR remote control
- 1x RS232 cable (3-pin terminal block to DB9)
- 2x Matrix rack mount brackets
- 6x Matrix rack mount bracket screws
- 14x Receiver mount brackets
- 28x Receiver mount bracket screws
- 4x Trapezoidal plastic feet
- 28x Round plastic feet
- 1x User's manual

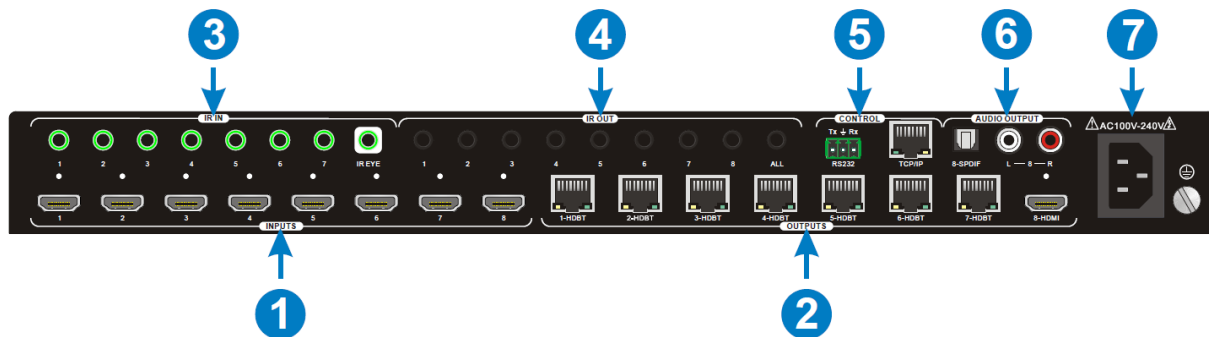
# PRODUCT OVERVIEW

## Matrix/Transmitter Front Panel



1. **FIRMWARE:** Micro USB port for performing firmware updates.
2. **POWER LED:** The LED illuminates red when power is applied.
3. **INPUTS:** A series of eight buttons and LEDs corresponding to the eight inputs.
4. **OUTPUTS:** A series of eight buttons and LEDs corresponding to the eight outputs.

## Matrix/Transmitter Rear Panel

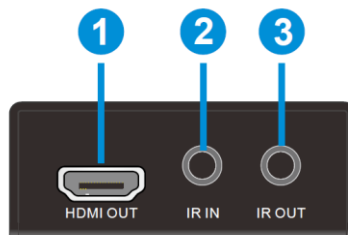


1. **INPUTS:** Eight HDMI® ports for connecting the HDMI source devices (Blu-ray Disc™ or DVD players, gaming consoles, etc.).
2. **OUTPUTS:** Seven HDBaseT™ RJ45 jacks for connecting the seven HDBaseT receivers, plus an HDMI port for connecting a local display.
3. **IR IN:** Seven numbered 3.5mm jacks for connecting IR receivers (not included) to allow distribution of IR control signals to the HDBaseT receivers, plus an eighth IR

EYE 3.5mm jack for connecting the included IR receiver for use with the included IR remote control.

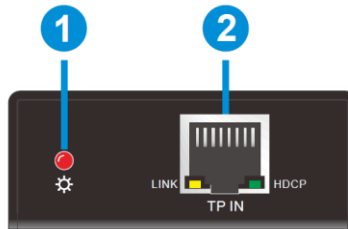
4. **IR OUT:** Eight numbered 3.5mm jacks for connecting IR transmitters (not included) for control of the video source devices from the remote locations, plus a ninth 3.5mm jack for connecting a single IR transmitter (not included) for controlling all the source devices from the remote locations.
5. **CONTROL:** One RJ45 Ethernet connector and one 3-pin RS232 terminal block for TCP/IP and RS232 control.
6. **AUDIO OUTPUTS:** One optical S/PDIF for multichannel digital audio and one stereo RCA pair for stereo analog audio.
7. **POWER:** IEC 60320 C14 connector for connecting the included AC power cable.

## Receiver Front Panel



1. **HDMI OUT:** HDMI® port for connecting an HDMI display.
2. **IR IN:** 3.5mm jack for connecting one of the included IR receivers.
3. **IR OUT:** 3.5mm jack for connecting one of the included IR transmitters.

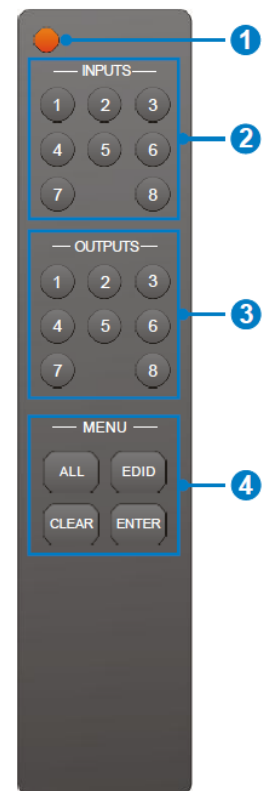
## Receiver Rear Panel



1. **POWER LED:** The LED illuminates red when the receiver is being powered by the transmitter over the HDBaseT™ cable.
2. **TP IN:** RJ45 jack for connecting the HDBaseT cable. The **LINK** LED illuminates yellow when a valid link is established between the receiver and the transmitter. It blinks yellow when there is a link error and is off when no link exists. The **HDCP** LED illuminates green when the video signal contains HDCP data. It blinks green when there is video without HDCP data and is off when no video is present.

## IR Remote Control

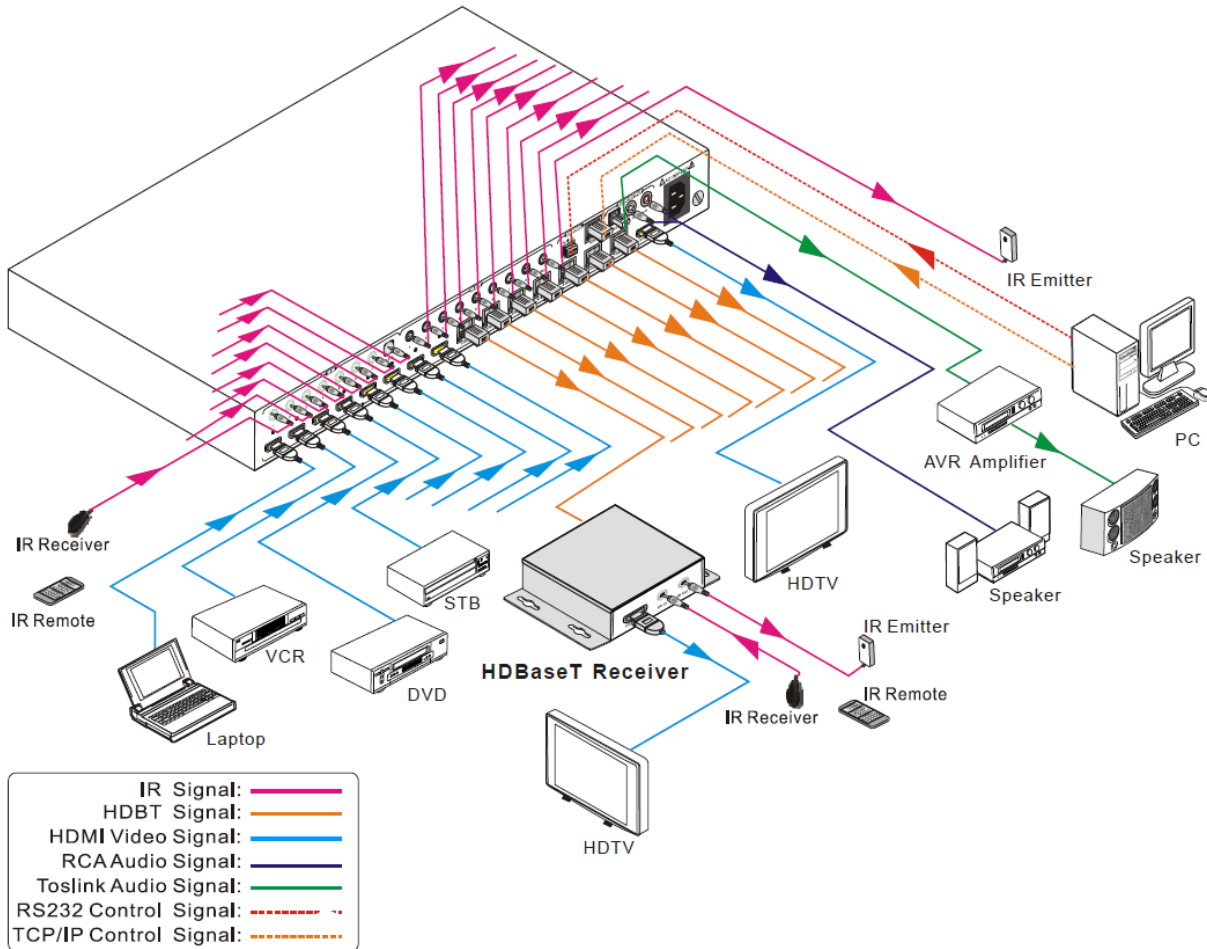
1. **STANDBY:** Press the button to enter or exit standby mode.
2. **INPUTS:** Press the button corresponding to the desired input.
3. **OUTPUTS:** Press the button corresponding to the desired output.
4. **MENU:**
  - **ALL:** Press the **ALL** button to select all outputs.
  - **EDID:** Press the **EDID** button to manually capture and learn the EDID data from the selected output device for the selected input device(s).
  - **CLEAR:** Press the **CLEAR** button to cancel an operation.
  - **ENTER:** Press the **ENTER** button to confirm the operation.





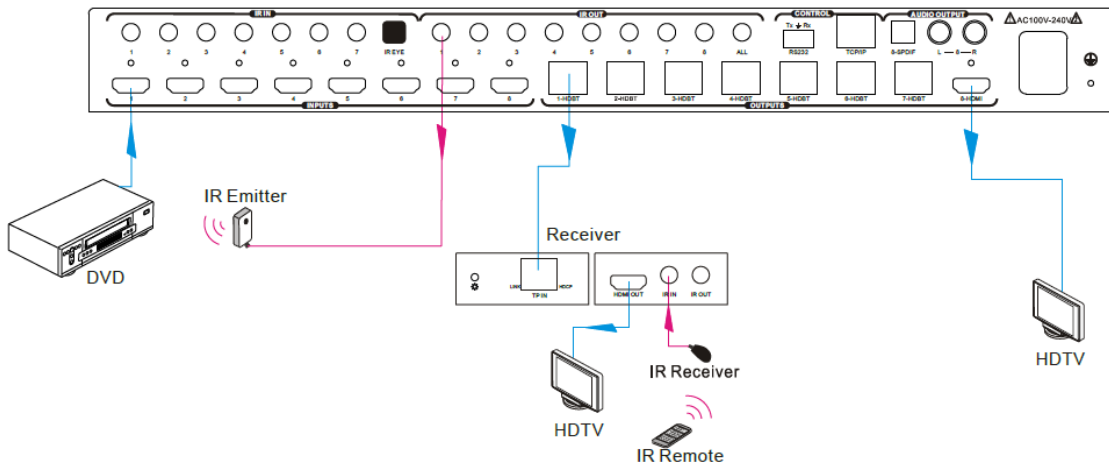
# INSTALLATION

Perform the following steps to install the matrix and receivers.

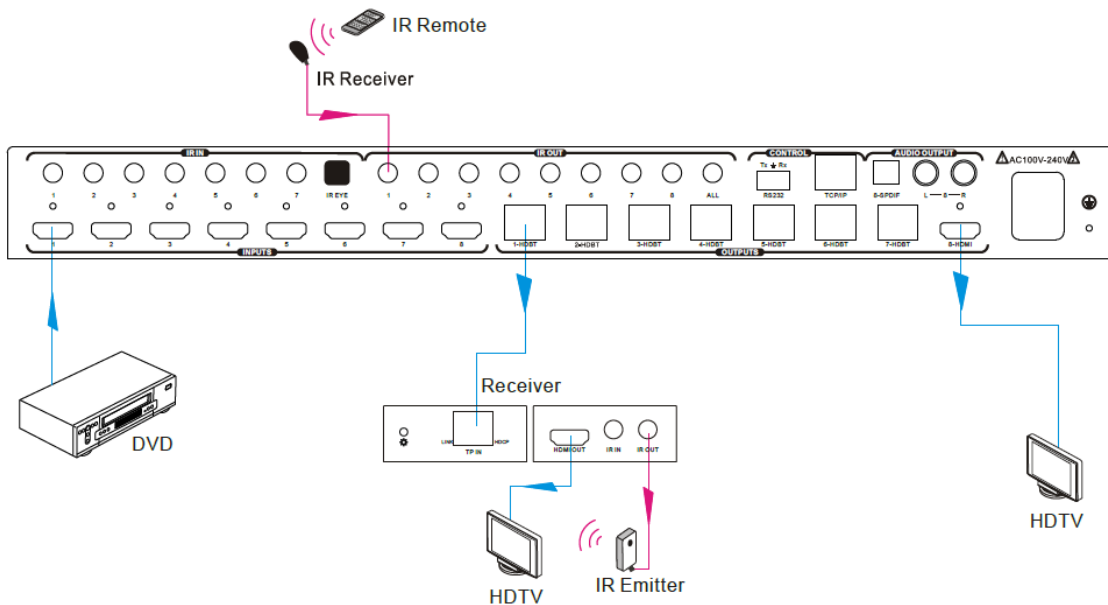


1. Ensure that all equipment to be connected is powered off and unplugged from its power source.
2. Place the matrix/transmitter and the seven receivers in their intended locations. Use the mounting brackets as desired to mount the matrix/transmitter into a rack or to secure the receivers.
3. Using a High Speed HDMI® Cable (not included), plug one end into the HDMI input on one of your displays, then plug the other end into the **HDMI OUT** jack on the receiver. Repeat for the other six remote displays and receivers.
4. (Optional) If you want to control the video source devices from the remote locations, plug an IR receiver (not included) into the **IR IN** jack on the receiver, then

position the IR receiver where it can receive infrared signals from the remote control. Alternatively, if you want to control the remote displays from the matrix/transmitter instead, plug an IR transmitter (not included) into the **IR OUT** jack on the receiver, then position the IR emitter where it can transmit infrared signals to the display's IR "eye". Repeat for the other six receivers.



*Controlling the Source Devices from the Remote Locations*



*Controlling the Remote Displays from the Matrix/Transmitter Location*

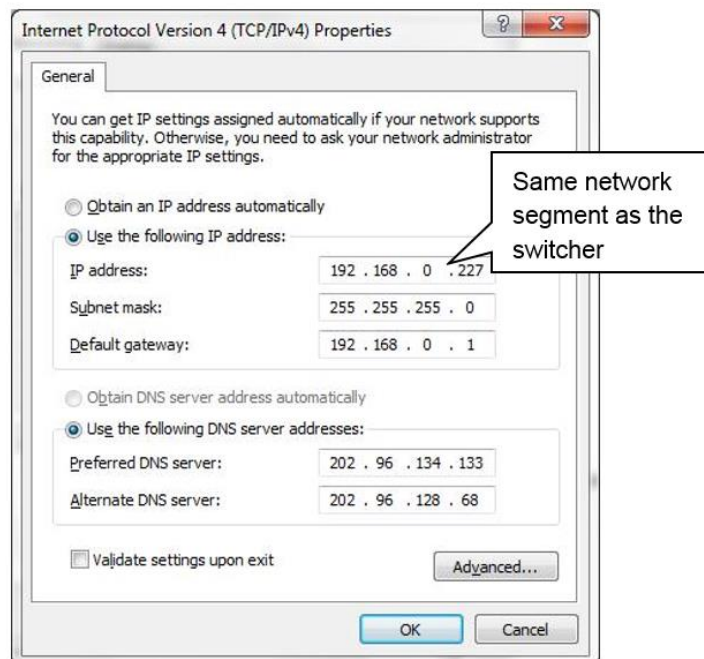
5. Using a High Speed HDMI® Cable (not included), plug one end into the HDMI input on your local display, then plug the other end into the **8-HDMI** output on the matrix/transmitter.
6. (Optional) If you want to use your home audio system to amplify multichannel digital audio, plug one end of a digital optical S/PDIF cable (not included) into the digital optical S/PDIF input on your amplifier or receiver, then plug the other end into the **8-SPDIF** port on the matrix/transmitter.
7. (Optional) If you want to use powered speakers or connect a stereo audio amplifier, plug one end of a stereo RCA cable (not included) into the audio inputs on your powered speakers or stereo amplifier, then plug the other end into the **L-8-R** jacks on the matrix/transmitter.
8. Plug the included IR receiver into the **IR EYE** jack on the matrix/transmitter, then position the IR receiver where it can receive infrared signals from the included remote control.
9. Using a High Speed HDMI Cable (not included), plug one end into one of the HDMI **INPUTS** on the matrix/transmitter, then plug the other end into the HDMI output on one of your video source devices (Blu-ray Disc™ or DVD players, gaming consoles, etc.). Repeat for up to seven additional video source devices.
10. (Optional) If you want to control the video source devices from the remote locations, plug eight IR transmitters (not included) into the numbered **IR OUT** jacks, then position the IR emitters where they can transmit infrared signals to the corresponding video source devices. Instead of using eight IR transmitters, plug a single IR transmitter (not included) into the **IR OUT ALL** jack, then position the IR emitter where it can transmit IR control signals to all of the video source devices. Alternatively, if you want to control the remote displays from the matrix/transmitter, plug seven IR receivers (not included) into the numbered **IR IN** jacks on the matrix/transmitter, then position the IR "eyes" where they can receive infrared signals from the remote controls.
11. Using a Cat6 Ethernet cable (not included), plug one end into the **TP IN** jack on the one of the receivers, then plug the other end into one of the **HDBT OUTPUTS** on the matrix/transmitter. Repeat for the other six receivers.

12. (Optional) If you want to control the system using your computer's web browser, plug one end of a Cat6 Ethernet cable (not included) into the **TCP/IP** jack on the matrix/transmitter, then plug the other end into a network switch or directly into the Ethernet jack on your computer.
13. (Optional) If you want to control the system using a third party RS232 control software on your computer, plug the terminal block end of the included RS232 cable into the **RS232** terminal block on the matrix/transmitter, then plug the DB9 connector into one of your computer's COM ports (COM1 ~ COM9 only).
14. Plug in and power on all connected equipment. Start video playback on each of the video source devices, then use the controls to verify that each video source can be displayed on each of the remote displays, as well as the local display. If you connected one or both of the local audio outputs, verify that you can hear the audio from the connected device(s). If you are using the IR extension feature, verify that you can control the intended devices.

## CONFIGURING FOR TCP/IP CONTROL

If you connected the matrix/transmitter to an existing network, there is no special configuration required. However, if you connected your PC's network interface directly to the TCP/IP jack on the matrix/transmitter, you will need to configure your PC's network settings to communicate with the matrix/transmitter. The matrix/transmitter uses the following network settings:

**IP Address:** 192.168.0.178  
**Subnet Mask:** 255.255.255.0  
**Gateway:** 192.168.0.1  
**Serial Port:** 4001



The default IP Address and Gateway can be changed using the TCP/IP GUI interface, but the Serial Port cannot be changed.

## OPERATION

### Front Panel Control

- To assign one of the inputs to one or more outputs, first press the **INPUT** button corresponding to the desired input. Next, press one or more **OUTPUT** buttons to assign the selected input to those output(s).

Examples:

- To assign input 3 to output 8, first press the **INPUT 3** button, then press the **OUTPUT 8** button.
- To assign input 6 to outputs 1, 3, and 5, first press the **INPUT 6** button, then press the **OUTPUT 1** button, followed by the **OUTPUT 3** button, followed by the **OUTPUT 5** button.

### Remote Control

- Press the **STANDBY (1)** button to enter or exit Standby mode.
- To switch the selected input for one or more of the outputs, first press the number corresponding to the desired **INPUT (2)**, then press one or more **OUTPUTS (3)** or the **ALL (4)** button, then press the **ENTER (4)** button to execute the change.

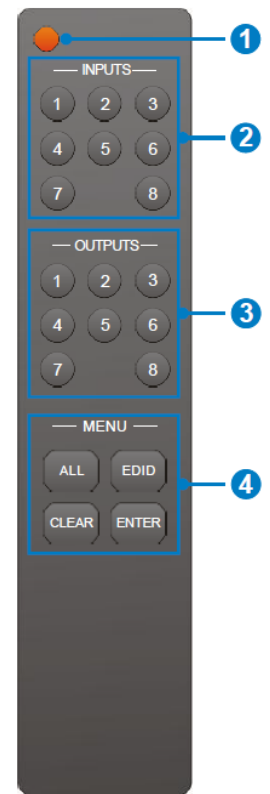
Examples:

- To send input 7 to output 2, first press the **INPUTS 7** button, then press the **OUTPUTS 2** button, and finally press the **ENTER** button to execute the change.
- To send input 1 to outputs 1 and 5, first press the **INPUTS 1** button, then press both the **OUTPUTS 1** and **5** buttons, and finally press the **ENTER** button to execute the change.

- To send input 4 to all outputs, first press the **INPUTS 4** button, then press the **ALL** button, and finally press the **ENTER** button to execute the change.
- To set the EDID for one or more source devices to the EDID capabilities of a specific output, press the **EDID (4)** button, then press the desired **INPUTS (2)** or the **ALL (4)** button, then press the **OUTPUTS (3)** button corresponding to the desired display, finally press the **ENTER (4)** button to execute the operation.

Examples:

- To set source device 1 to the EDID capabilities of display 6, first press the **EDID** button, next press the **INPUTS 1** button, then press the **OUTPUTS 6** button, and finally press the **ENTER** button to execute the change.
- To set all source devices to the EDID capabilities of display 4, first press the **EDID** button, next press the **ALL** button, then press the **OUTPUTS 4** button, and finally press the **ENTER** button to execute the change.
- To cancel an operation or change before it is executed, press the **CLEAR** button at any time before pressing the **ENTER** button.

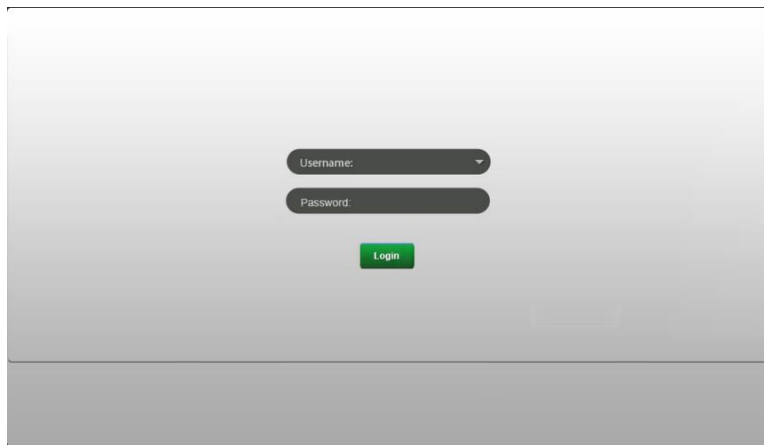


## TCP/IP Control

If you have connected the matrix/transmitter to your Ethernet network or if you connected your PC's network card directly to the TCP/IP port on the matrix/transmitter, you can access the built-in TCP/IP Graphical User Interface (GUI) by opening your internet browser and typing the IP address into the address field. The default IP address is:

192.168.0.178

After pressing ENTER, you will be presented with the **Login** screen.



Type the username and password into the appropriate fields, then click the **Login** button. The default usernames and passwords are as follows:

Username	Password
admin	admin
user	user

Once you have logged in, you will be presented with the **Main** screen.

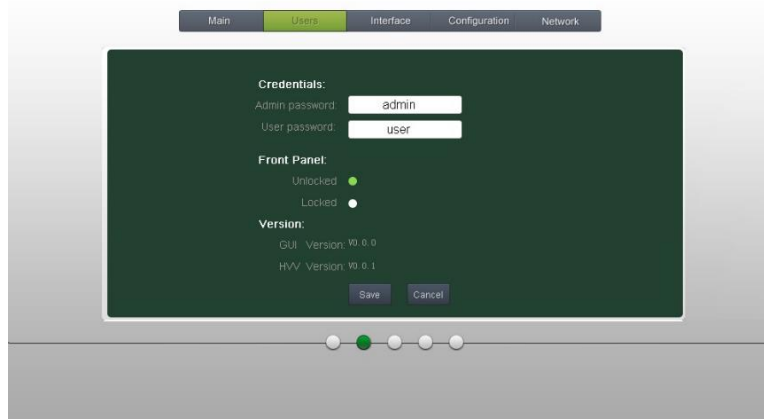


Use the 8x8 button grid on the left side to set which inputs are directed to which outputs. For example, clicking the button on the Input 1 row and Output 2 column, directs input 1 to output 2.

Use the 9 numbered buttons on the right in conjunction with the **Save** and **Recall** buttons to save and load layout presets.

- To save a given layout, first click one of the numbered buttons, then click the **Save** button.
- To load a previously saved layout, first click one of the numbered buttons, then click the **Recall** button.

The **Users** screen allows you to modify the two passwords, lock or unlock the front panel controls, and view the GUI and hardware version numbers. Click the **Save** button to save any changes or click the **Cancel** button to cancel any changes that have been made.





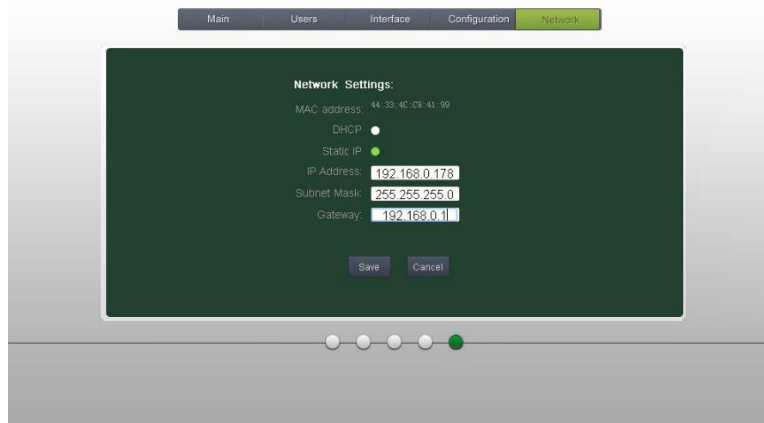
Use the **Interface** screen to change the labels that are displayed on screen for the matrix/transmitter, the four inputs, and the four outputs. Click the **Save** button to save any changes or click the **Cancel** button to cancel any changes that have been made.



The **Configuration** screen allows you to manage HDCP compliance and the EDID settings. Click the **Save** button to save any changes or click the **Cancel** button to cancel any changes that have been made.

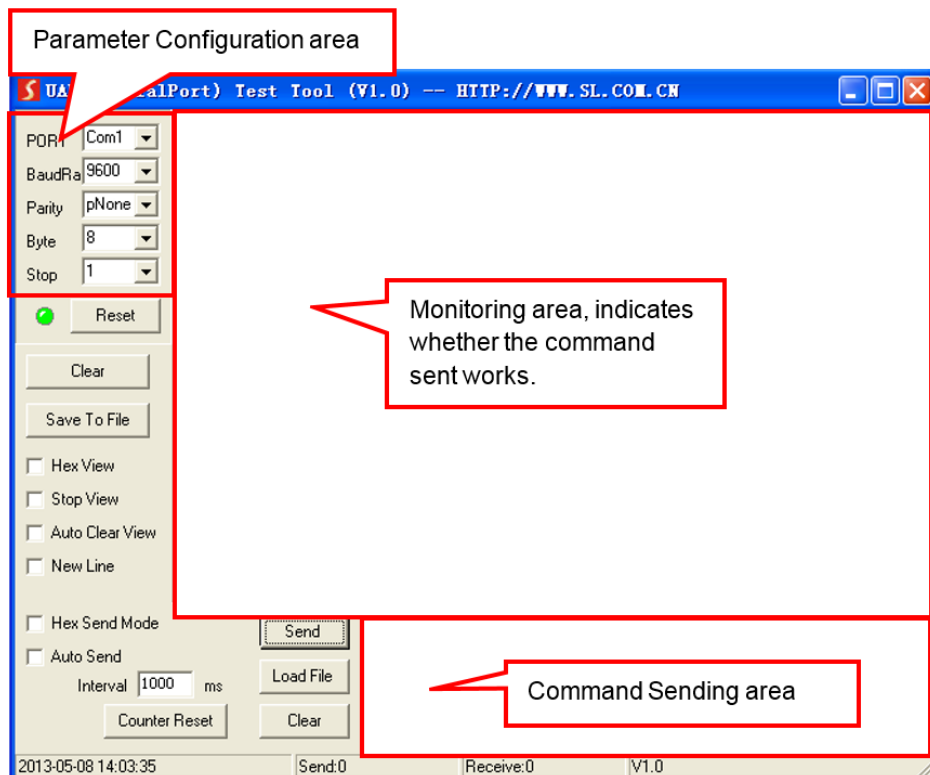


The **Network** screen allows you to view the **MAC Address** and to change the default **IP Address**, **Subnet Mask**, and **Gateway** settings. You can also decide to use the **Static IP** or Dynamic Host Configuration Protocol (**DHCP**). Click the **Save** button to save any changes or click the **Cancel** button to cancel any changes that have been made.



## RS232 Control

If you wish to control the matrix/transmitter from your PC using an RS232 connection, you will need to use a third party RS232 control software package, such as CommWatch.exe, whose interface is depicted below.



Set the communications parameters to the following:

**Baud Rate:** 9600

**Data Bits:** 8

**Stop Bits:** 1

**Parity Bits:** None

The matrix/transmitter responds to the commands contained in the following table:

Command	Function	Feedback Example
<b>System Commands</b>		
/*Type;	Reports the model information.	XXXXX
/%Lock;	Locks the front panel buttons.	System Locked!
/%Unlock;	Unlocks the front panel buttons.	System Unlock!
/^Version;	Reports the firmware version.	VX.X.X
Demo.	Switches to "demo" mode, which automatically cycles through all the possible AV and IR connection combinations, with switching occurring every 2 seconds.	Demo Mode AV: 01 -> 01 IR: 01 -> 01 AV: 01 -> 02 IR: 01 -> 02 ... AV: 08 -> 08 IR: 08 -> 08 ...
<b>Operation Commands</b>		
[X]All.	Directs input [X] to all output channels. (X=01~08)	X to All.
All#.	Directs each input to its corresponding output (1 -> 1, 2 -> 2, etc.).	All Through.
All\$.	Switches all outputs off.	All Closed.
[X]#.	Directs input [X] to output [X] (X=01~08)	X Through.
[X]\$.	Switches output [X] off. (X=01~08)	X Closed.

Command	Function	Feedback Example
[X]@.	Switches output [X] on. (X=01~08)	X Open.
All@.	Switches all outputs on.	All Open.
[X1]V[X2].	Directs the AV signal for input [X1] to one or more outputs [X2]. Separate multiple outputs with a comma (.). (X1/X2=01~08)	AV: X1 -> X2
[X1]B[X2].	Directs both the AV and IR signals for input [X1] to one or more outputs [X2]. Separate multiple outputs with a comma (.). (X1/X2=01~08)	AV: X1 -> X2
[X1]R[X2].	Directs the IR signal for input [X1] to output [X2]. (X1/X2=01~08)	IR: X1 -> X2
Status[X].	Checks the I/O connection status of output [X]. (X/Y=01~08)	AV: Y -> X
Status.	Displays each of the four AV and IR connections, one-by-one.	AV: 01 -> 01 ... AV: 08-> 08 IR: 01 - > 01 ... IR: 08 - > 08

Command	Function	Feedback Example
Save[Y].	Saves the current connection settings to the preset command[Y]. (Y=0~9)	Save to FY
Recall[Y].	Loads the connection settings saved to preset command [Y]. (Y=0~9)	Recall From FY
Clear[Y].	Clears the connection settings saved to the preset command [Y]. (Y=0~9)	Clear FY
PWON.	Enables normal working mode.	PWON
PWOFF.	Enters standby mode and cuts off power to the HDBase™ receivers.	PWOFF
STANDBY.	Enters standby mode, but does not cut off power to the HDBase™ receivers.	STANDBY
/%[Y]/[X]:[Z].	HDCP management command. [Y] is for specifying input (I) or output (O). [X] is for the port number (01~08 or ALL). [Z] is for the compliance status, where 1 sets the port to HDCP compliant and 0 sets the port to HDCP not compliant.	/%[Y]/[X]:[Z].
DigitAudioON[X].	Enables HDMI® audio output for port [X]. (X=1~9, where 9 represents all ports)	DigitAudio ON with [X]
DigitAudioOFF[X].	Disables HDMI audio output for port [X]. (X=1~9, where 9 represents all ports)	DigitAudio OFF with [X]

Command	Function	Feedback Example
<p data-bbox="203 745 418 783">/+[Y]/[X]:*****.</p>	<p data-bbox="496 268 1068 401">Sets the communication parameters between the PC and one or more of the HDBaseT™ receivers.</p> <p data-bbox="496 436 1068 1031">(Y=1~9, A~H, or a~h, where 1~8 sends the command to the corresponding HDBaseT receiver and 9 sends the command to all HDBaseT receivers. For A~H and a~h, the command is saved to the matrix/transmitter and is not sent immediately to the corresponding HDBaseT receiver. For A~H, the saved command is sent to the corresponding HDBaseT receiver when a PWON command is sent and for a~h, the saved command is sent when a PWOFF command is sent.)</p> <p data-bbox="496 1066 1068 1199">(X is the baud rate, where 1=2400, 2=4800, 3=9600, 4=19200, 5=38400, 6=57600, and 7=115200)</p> <p data-bbox="496 1234 1068 1268">(***** is for the data, up to 48 bytes)</p>	<p data-bbox="1094 745 1175 768">*****</p>
<p data-bbox="203 1514 396 1547">EDIDH[X]B[Y].</p>	<p data-bbox="496 1304 1068 1688">Sends the EDID data from the display connected to output [X] to the source device connected to input [Y]. If EDID data is available and the audio portion supports audio types other than PCM, it forces it to set to PCM mode only. If EDID data is not available, the EDID is set to the default value.</p> <p data-bbox="496 1724 672 1757">(X/Y=01~08)</p>	<p data-bbox="1094 1514 1281 1547">EDIDH[X]B[Y]</p>

Command	Function	Feedback Example
EDIDPCM[X].	Sets the audio format for input [X] to PCM. (X/Y=01~08)	EDIDPCM[X]
EDIDG[X].	Gets the EDID data from output [X] and displays the output port number. (X=1~9)	Hexadecimal EDID data and carriage return character.
EDIDMInit.	Sets the EDID data for each input to the default value.	EDIDMInit.
EDIDM[X]B[Y].	Sends the EDID data from output [X] to input [Y]. If EDID data is not available, it sets input [Y] to the default EDID value. (X/Y=1~8)	EDIDM[X]B[Y]
EDIDUpgrade[X].	Upgrades the EDID for input [X]. When the matrix/transmitter receives the command it prompts you to send the EDID file (.bin file). The operation will be cancelled after 10 seconds if no file is sent. Note that all HDBase™ receivers must be disconnected prior to sending this command. (X=1~9, where 9 represents all inputs)	Please send the EDID file



Command	Function	Feedback Example														
EDID/[X]/[Y].	<p>Sets the EDID data of input [X] to EDID value [Y] from the internal EDID table.</p> <p>(X=1~9, where 9 represents all input ports)</p> <p>(Y=1~6)</p> <table border="1" data-bbox="500 562 1066 1041"> <thead> <tr> <th data-bbox="500 562 591 627">#</th> <th data-bbox="591 562 1066 627">EDID Settings</th> </tr> </thead> <tbody> <tr> <td data-bbox="500 627 591 695">1</td> <td data-bbox="591 627 1066 695">1080p 2D 2-channel audio</td> </tr> <tr> <td data-bbox="500 695 591 762">2</td> <td data-bbox="591 695 1066 762">1080p 3D 2-channel audio</td> </tr> <tr> <td data-bbox="500 762 591 829">3</td> <td data-bbox="591 762 1066 829">1080p 2D multichannel audio</td> </tr> <tr> <td data-bbox="500 829 591 896">4</td> <td data-bbox="591 829 1066 896">1080p 3D multichannel audio</td> </tr> <tr> <td data-bbox="500 896 591 963">5</td> <td data-bbox="591 896 1066 963">4K@30Hz 2D 2-channel audio</td> </tr> <tr> <td data-bbox="500 963 591 1031">6</td> <td data-bbox="591 963 1066 1031">4K@60Hz 2D 2-channel audio</td> </tr> </tbody> </table>	#	EDID Settings	1	1080p 2D 2-channel audio	2	1080p 3D 2-channel audio	3	1080p 2D multichannel audio	4	1080p 3D multichannel audio	5	4K@30Hz 2D 2-channel audio	6	4K@60Hz 2D 2-channel audio	EDID/[X]/[Y]
#	EDID Settings															
1	1080p 2D 2-channel audio															
2	1080p 3D 2-channel audio															
3	1080p 2D multichannel audio															
4	1080p 3D multichannel audio															
5	4K@30Hz 2D 2-channel audio															
6	4K@60Hz 2D 2-channel audio															

Command	Function	Feedback Example														
UpgradeIntEDID[X].	<p>Upgrades one of the 5 EDID values on the embedded EDID table. When the matrix/transmitter receives the command it prompts you to send the EDID file (.bin file). The operation will be cancelled after 10 seconds if no file is sent. Note that all HDBaseT™ receivers must be disconnected prior to sending this command.</p> <p>(X=1~6)</p> <table border="1" data-bbox="500 800 1068 1278"> <thead> <tr> <th data-bbox="500 800 591 867">#</th> <th data-bbox="591 800 1068 867">EDID Settings</th> </tr> </thead> <tbody> <tr> <td data-bbox="500 867 591 934">1</td> <td data-bbox="591 867 1068 934">1080p 2D 2-channel audio</td> </tr> <tr> <td data-bbox="500 934 591 1001">2</td> <td data-bbox="591 934 1068 1001">1080p 3D 2-channel audio</td> </tr> <tr> <td data-bbox="500 1001 591 1068">3</td> <td data-bbox="591 1001 1068 1068">1080p 2D multichannel audio</td> </tr> <tr> <td data-bbox="500 1068 591 1136">4</td> <td data-bbox="591 1068 1068 1136">1080p 3D multichannel audio</td> </tr> <tr> <td data-bbox="500 1136 591 1203">5</td> <td data-bbox="591 1136 1068 1203">4K@30Hz 2D 2-channel audio</td> </tr> <tr> <td data-bbox="500 1203 591 1278"></td> <td data-bbox="591 1203 1068 1278">4K@60Hz 2D 2-channel audio</td> </tr> </tbody> </table>	#	EDID Settings	1	1080p 2D 2-channel audio	2	1080p 3D 2-channel audio	3	1080p 2D multichannel audio	4	1080p 3D multichannel audio	5	4K@30Hz 2D 2-channel audio		4K@60Hz 2D 2-channel audio	Please send the EDID file
#	EDID Settings															
1	1080p 2D 2-channel audio															
2	1080p 3D 2-channel audio															
3	1080p 2D multichannel audio															
4	1080p 3D multichannel audio															
5	4K@30Hz 2D 2-channel audio															
	4K@60Hz 2D 2-channel audio															
GetIntEDID[X].	<p>Returns the EDID data value from the embedded EDID table.</p> <p>(X=1~8)</p>															
GetInPortEDID[X]	<p>Returns the EDID data value for input [X].</p> <p>(X=1~8)</p>															
%0801.	Enables auto HDCP management and activates carrier native mode.	%0801														
%0900.	Switches to carrier native mode.	Carrier native														
%0901.	Switches to force carrier mode.	Force carrier														

Command	Function	Feedback Example
%0911.	Resets the matrix/transmitter to the factory default values.	Factory Default
%9941.	Reports the command sent by port 1 when a PWOFF command is sent.	Port 1:data when PWOFF
%9942.	Reports the command sent by port 2 when a PWOFF command is sent.	Port 2:data when PWOFF
%9943.	Reports the command sent by port 3 when a PWOFF command is sent.	Port 3:data when PWOFF
%9944.	Reports the command sent by port 4 when a PWOFF command is sent.	Port 4:data when PWOFF
%9945.	Reports the command sent by port 5 when a PWOFF command is sent.	Port 5:data when PWOFF
%9946.	Reports the command sent by port 6 when a PWOFF command is sent.	Port 6:data when PWOFF
%9947.	Reports the command sent by port 7 when a PWOFF command is sent.	Port 7:data when PWOFF
%9948.	Reports the command sent by port 8 when a PWOFF command is sent.	Port 8:data when PWOFF
%9951.	Reports the command sent by port 1 when a PWON command is sent.	Port 1:data when PWON
%9952.	Reports the command sent by port 2 when a PWON command is sent.	Port 2:data when PWON
%9953.	Reports the command sent by port 3 when a PWON command is sent.	Port 3:data when PWON
%9954.	Reports the command sent by port 4 when a PWON command is sent.	Port 4:data when PWON

Command	Function	Feedback Example
%9955.	Reports the command sent by port 5 when a PWON command is sent.	Port 1:data when PWOFF
%9956.	Reports the command sent by port 6 when a PWON command is sent.	Port 2:data when PWOFF
%9957.	Reports the command sent by port 7 when a PWON command is sent.	Port 3:data when PWOFF
%9958.	Reports the command sent by port 8 when a PWON command is sent.	Port 4:data when PWOFF
%9961.	Reports the system locking status.	System Locked / Unlock!
%9962.	Reports the power status.	STANDBY / PWON / PWOFF
%9963.	Reports the status of the infrared carrier.	Carrier native / Force carrier
%9964.	Reports the IP address.	IP:192.168.0.178 (default)
%9971.	Reports the connection status for all inputs. (Y=Y, N)	In        01 02 03 04 Connect Y Y Y Y  In        05 06 07 08 Connect Y Y Y Y
%9972.	Reports the connection status for all outputs. (Y=Y, N)	Out       01 02 03 04 Connect Y Y Y Y  Out       05 06 07 08 Connect Y Y Y Y
%9973.	Reports the HDCP status of the inputs. (Y=Y, N)	In        01 02 03 04 HDCP    Y Y Y Y  In        05 06 07 08 HDCP    Y Y Y Y

Command	Function	Feedback Example
%9974.	Reports the HDCP status of the outputs. (Y=Y, N)	Out    01 02 03 04 HDCP   Y Y Y Y  Out    05 06 07 08 HDCP   Y Y Y Y
&9975.	Reports the I/O connection status.	Out    01 02 03 04 In     01 02 03 04  Out    05 06 07 08 In     05 06 07 08
%9976.	Reports the output resolution.	Out 1   1920x1080 Out 2   1920x1080 Out 3   1920x1080 Out 4   1920x1080 Out 5   1920x1080 Out 6   1920x1080 Out 7   1920x1080 Out 8   1920x1080
%9977.	Reports the status of digital audio for each output channel. (Y=Y, N)	Out     1 2 3 4 Audio   Y Y Y Y  Out     5 6 7 8 Audio   Y Y Y Y
%9978.	Reports the HDCP compliance status of the inputs. (Y=Y, N)	In       01 02 03 04 HDCPEN Y Y Y Y  In       05 06 07 08 HDCPEN Y Y Y Y
I-Lock[X].	Locks channel [X]. (X=1~8)	Channel[X] Lock!
I-Unlock[X].	Unlocks channel [X]. (X=1~8)	Channel[X] Unlock!

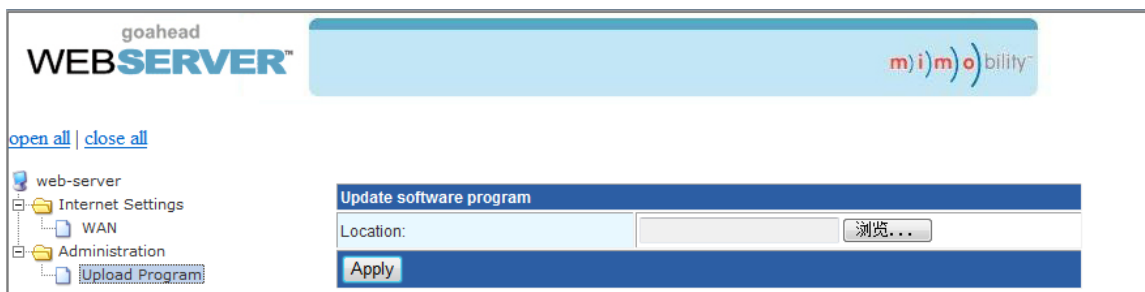
Command	Function	Feedback Example
A-Lock.	Locks all channels.	All Channel Lock!
A-Unlock.	Unlocks all channels.	All Channel Unlock!
Lock-Sta.	Reports the lock status of all channels.	Channel 1 -> 1 Lock! Channel 2 -> 1 Unlock! Channel 3 -> 1 Unlock! ... Channel 1 -> 2 Unlock! Channel 2 -> 2 Lock! ... Channel 8 -> 8 Unlock!

Notes:

1. The brackets [ and ] in the above commands are for clarity purposes to make the variable more obvious. Do not type these symbols when typing the commands.
2. Type in all commands exactly. They are case sensitive and require the trailing period (.) or semicolon (;) as part of the command.
3. Disconnect all HDBaseT™ receivers from the matrix/transmitter prior to performing any of the upgrade commands.

## GUI UPDATES

Perform the following steps to update the GUI, in the event that an update is made available.



1. Open your PC's web browser and type the following address into the address bar:  

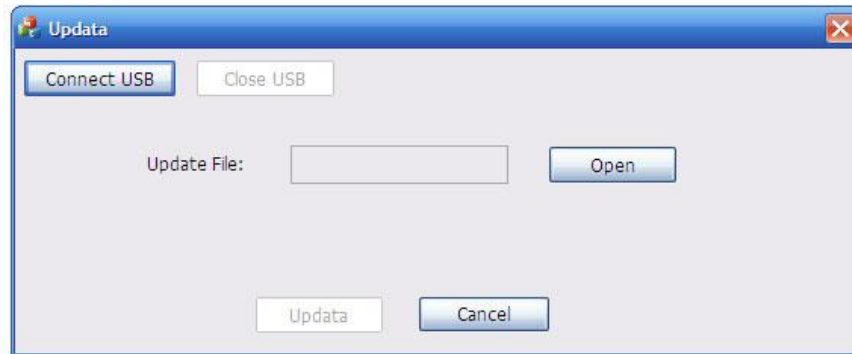
http://192.168.0.178:100
2. Type in the administration username and password (default **admin** and **admin**).
3. Click the **Administration** entry on the left
4. Click the **Upload Program** entry.
5. Click the **Browse** button, then locate the update file on your PC.
6. Click the **Apply** button, then follow the on-screen instructions.

## USB FIRMWARE UPDATE

1. Perform the following steps to update the firmware, in the event that an update is made available. Note that you should be using a COM port between 1~9.
1. Copy the update software (.exe file) and update file (.bin file) to your computer.
2. Using a micro USB cable (not included), plug one end into the **FIRMWARE** port on the matrix/transmitter's front panel.
3. Double-click the update software icon to launch the firmware updater.



4. Click the **Connect USB** button.



5. Click the **Open** button, then use the file browser to locate and select the update file.
6. Click the **Updata** button to start the firmware upgrade process.

## TROUBLESHOOTING

Q1: There is no video present on one of the displays.

A1: Check the cable connections. Try replacing the HDMI® cable with a known good one. Verify that the Link LED is illuminated.

Q2: One of the displays has no video when one of the inputs is selected.

A2: Verify that the EDID for that input is set to a resolution supported by the display in question. Ensure that the input and output ports are set for HDCP compliance.

Q3: The front panel buttons are inoperative.

A3: Ensure that the front panel controls are not locked.

Q4: The remote control does not function.

A4: Try replacing the batteries with new ones. Ensure that you are within IR range and that you are pointing the remote at the IR receiver eye. Try enabling Force Carrier mode.



Q5: One of the Link LEDs is off or is blinking.

A5: Ensure that the HDBaseT™ Ethernet cable is no longer than the maximum distance for the selected video resolution. Try replacing the HDBaseT Ethernet cable with a known good one.

## 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](http://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](mailto:tech@monoprice.com)

# SPECIFICATIONS

## Transmitter

Model	21819
Video Inputs	8x HDMI®
Video Outputs	1x HDMI, 7x HDBaseT™
Audio Outputs	1x Optical S/PDIF, 2x Analog RCA (stereo pair)
HDMI Version	1.4
HDCP Version	2.2
Maximum Video Resolution	4K@60Hz 4:2:0
Maximum Bandwidth	10.2 Gbps
Transmission Standard	HDBaseT
Transmission Distance	1080p@60Hz: up to 229 feet (70 meters) 4K@60Hz: up to 131 feet (40 meters)
Gain	0dB
Switching Speed	up to 200ns
Audio Frequency Response	20 Hz ~ 20 kHz
Control Options	Front Panel, IR Remote, TCP/IP, RS232
Input Power	100 ~ 240 VAC, 50/60 Hz
Maximum Power Consumption	93 watts
Operating Temperature	+32 ~ +122°F (0 ~ +50°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions	17.2" x 1.7" x 11.8" (436 x 44 x 300 mm)
Weight	6.4 lbs. (2.9 kg)

## Receivers

Video Input	1x HDBaseT™
Video Output	1x HDMI®
HDMI Version	1.4
HDCP Version	1.4
Maximum Video Resolution	4K@60Hz
Maximum Bandwidth	10.2 Gbps
Transmission Standard	HDBaseT
Transmission Distance	1080p@60Hz: up to 229 feet (70 meters) 4K@60Hz: up to 131 feet (40 meters)
Input Power	Power over Cable (PoC)
Operating Temperature	+32 ~ +122°F (0 ~ +50°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions (each)	2.4" x 0.9" x 4.7" (61 x 24 x 120 mm)
Weight (each)	9.9 oz. (280g)

## 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 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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