

Atlona HDMI 4 by 4 Matrix Switcher over CAT5e/6/7

AT-PRO3HD44M



User Manual

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Revision B (1/21/13):

Hardware update
New TCP/IP port Page 6

Revision B Part 2 (3/20/13):

TCP/IP Page 15-17
Internal EDIDs Page 11

Revision B Firmware 2.0.02 (8/14/13):

DHCP auto on Page 14-21 (TCP/IP instruction has changed)

Introduction

With the latest and more affordable HDBaseT® technology extend HDMI® sources up to 230ft over category cable. The Atlona HDMI 4 by 4 Matrix Switcher allows for effortless control of up to 8 devices through IR, RS-232, TCP/IP and the front panel. With built in S/PDIF ports send audio to an AVR or distribution amp. To ensure all audio passes through, the 4 by 4 Matrix Switcher supports all Lossy and Lossless formats of Dolby® and DTS™ over HDMI.

Package Contents

- 1 x AT-PRO3HD44M
- 1 x 24V/6.25A DC adaptor
- 1 x Power cord
- 1 x IR Extender
- 5 x IR Emitter
- 1 x Remote control
- 1 x Pair of dual purpose wall/rack mounts
- 1 x User Manual

Features

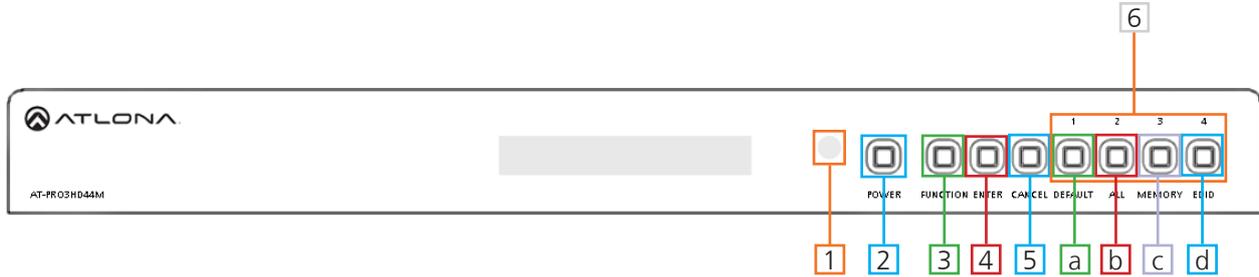
- HDBaseT allows IR, RS-232, audio and visual signals to pass over a single category cable.
- Latest feature of Power over Category cable (PoCc™) enables the matrix to power all compatible receivers.
- IR ports for zone dedicated control through IR remote control and 3rd party control boxes.
- Programmable I/O memories, save I/O routes for faster switching to the most commonly used configurations.
- EDID™ learning function for up to 4 video display EDIDs.
- Multiple control options such as RS-232, IR, TCP/IP, and the front panel.
- Dolby® TrueHD and DTS-HD Master Audio™ pass through HDMI output interface.
- Compatible with DVI/D (with DVI/D to HDMI adapter such as AT-HD610), allowing DVI/D to be passed to displays.
- Built in S/PDIF audio de-embedding for AVR or 2Ch distribution amplifiers.
Compatible with PCM 2Channel, Dolby 2.0, Dobby Digital 5.1, and DTS 5.1.
- HDCP compliant

Before You Start

- Make sure when connecting a category cable a 568B termination method is used.
 - Make sure the matrix is connected to a component surge suppressor with line conditioning.
- Note:** Atlona's warranty does not cover damage due to electrical disturbances. A component surge suppressor with line conditioning is highly suggested, especially in areas with electrical storms.
- Be sure you're using a mono to mono (2 conductor) 3.5mm IR cable available to purchase at Atlona.com) when using IR output control from 3rd party control boxes, stereo (3 conductor) 3.5mm cables are not compatible.

Panel Description

Front Panel



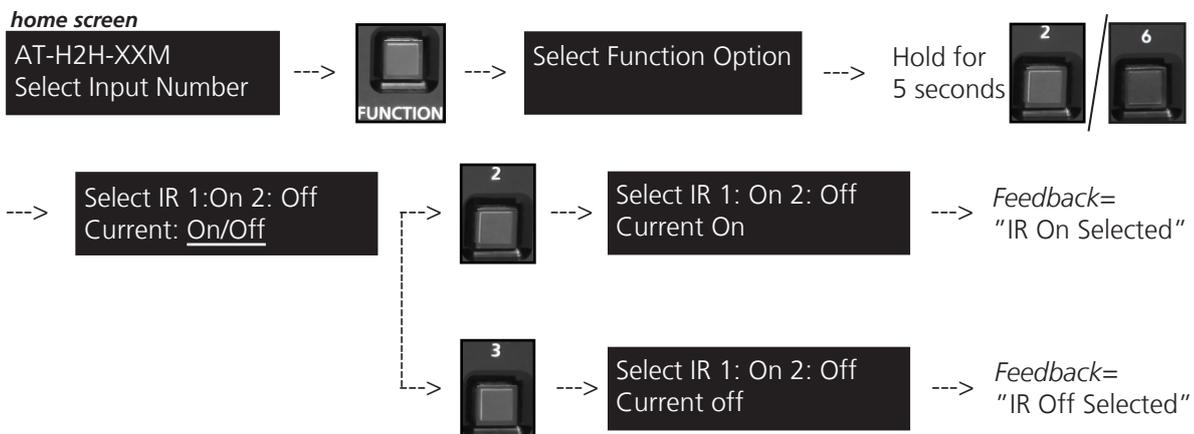
1. IR Receiver Window - Receives the signal from the included IR Remote Control or a 3rd party control box.
2. Power Button - Cycles the power between On (blue backlight) or Standby (red backlight) mode.
3. Function Button - Select for command options. (blue backlight when selected)
 - a. **Default:** Mirrors all inputs to corresponding outputs. (i.e. 1 to 1, 2 to 2, 3 to 3, etc.)
 - b. **All:** Save a single input to all the outputs with this function.
 - c. **Memory:** Save/load the current input and output route to memory.
 - d. **EDID:** Save/Load EDIDs to individual inputs.

Note: Default setting for EDID is the highest common HD resolution of all connected devices. (i.e. if you have resolutions ranging 720p, 1080i, and 1080p then 720p would be the default resolution for all connected displays.)

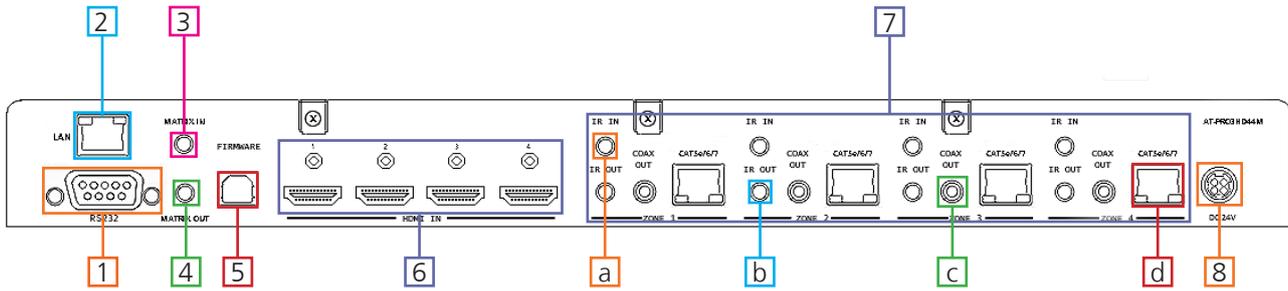
4. Enter Button - Use to view current status for inputs and outputs or to confirm a command.
 5. Cancel Button - Within the functions menu use to go back one screen or to the home screen.
- Note: You cannot power off or change functions unless you go to the home screen.**
6. Number buttons - Use these buttons to select input and output paths or use with the function button to change matrix settings.

IR

The IR receiver window can sometimes pick up stray reflected IR commands causing loss of functionality. To disable the front panel, see directions below:



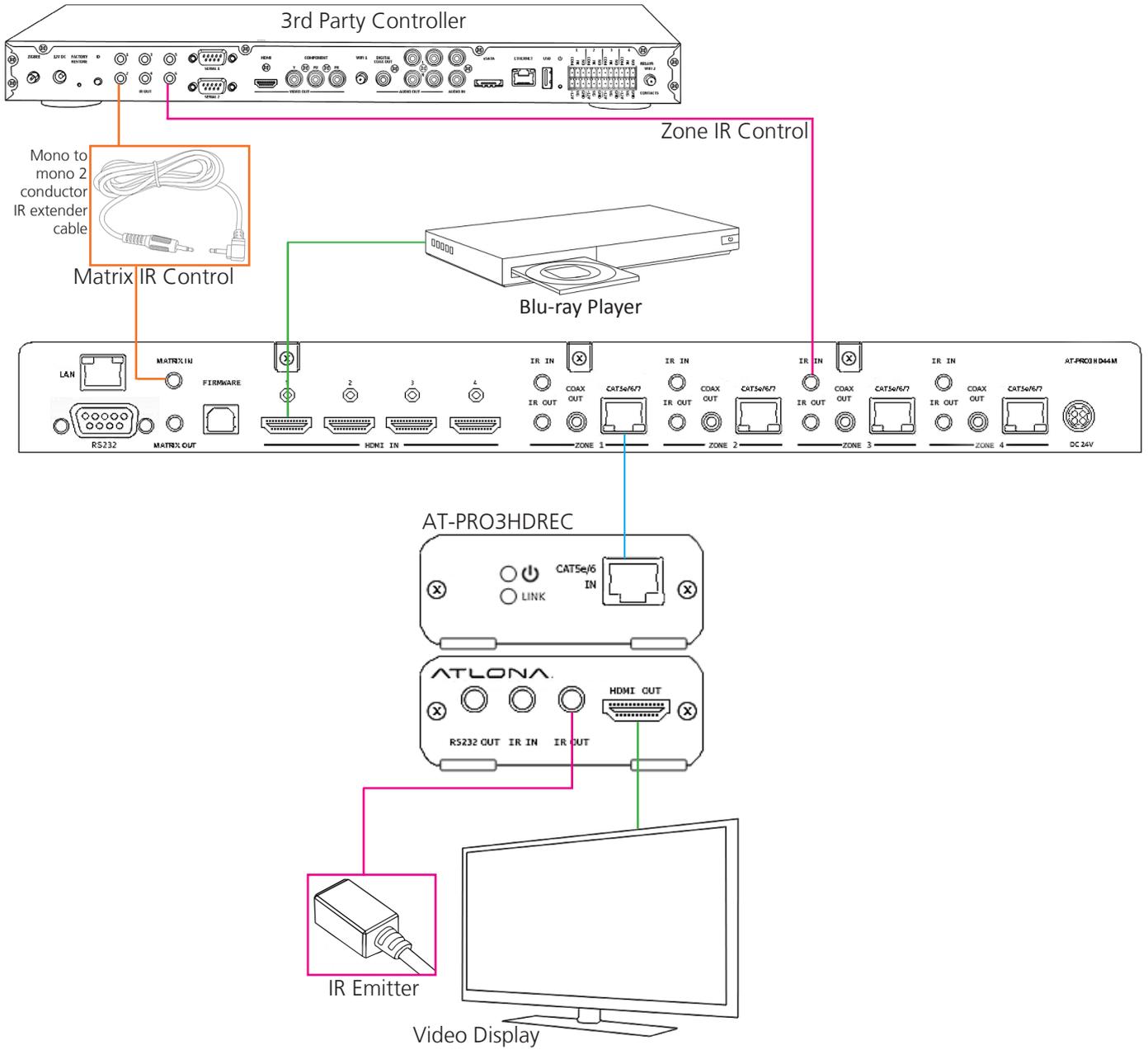
Back Panel



1. RS-232 - Connect to this port for control from a computer or 3rd party control box.
 2. LAN Port - For TCP/IP control
 3. Matrix IR IN - Used to control matrix I/O switching from a 3rd party IR control box.
 4. Matrix IR Out - Global output, combines IR for all incoming zones.
 5. Firmware Update - Type B USB Port used for updating matrix firmware
 6. HDMI Input Ports - Connect HDMI sources into these ports, such as DVD players, Blu-ray players, computers, etc.
 7. Zone dedicated ports
 - a. IR 3.5mm mono In ports: Used in conjunction with 3rd party IR control box to extend IR control commands to video displays over category cable.
 - b. IR Out ports: Sends IR signal to sources through a 3.5mm IR emitter
- Note: Be sure you're using a mono to mono 3.5mm IR cable for 3rd party control boxes, stereo 3.5mm cables are not compatible.**
- c. Coax Out (S/PDIF): Audio de-embedding for distribution amplifiers and AVRs. Compatible with LPCM 2Channel, Dolby 2.0, Dolby Digital 5.1, and DTS 5.1.
 - d. CAT5e/6/7 Out (RJ45): Extends video and bi-directional RS-232, IR, and audio signals through a single category cable.
 8. Power Port - Use included locking DC adaptor to power the matrix switcher

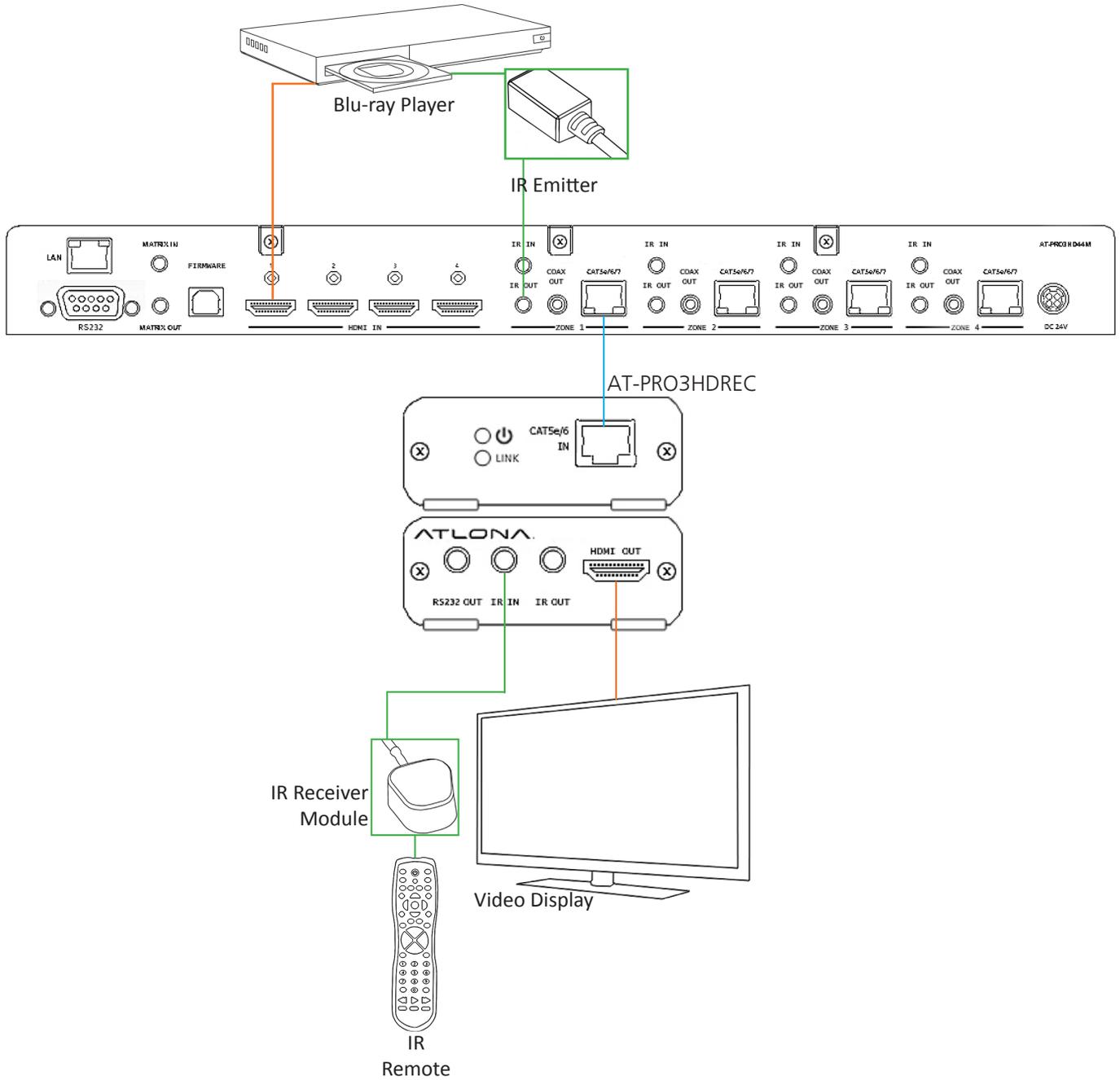
Connection and Installation

3rd Party Control box Set Up



IR Remote Control Set Up

Note: When using an IR remote control all sources can be controlled as well as the local display.



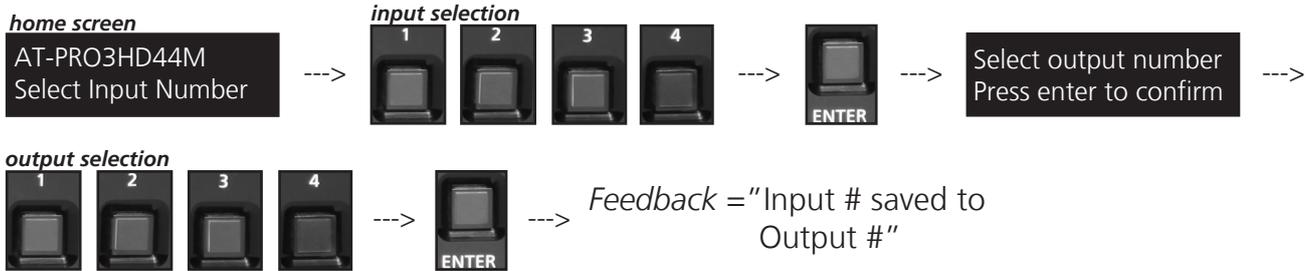
Matrix Front Panel Functions

The AT-PRO3HD44M's front panel has 3 functions: I/O control, EDID, and matrix settings. The following sections go over step by step setup & control.

I/O Control

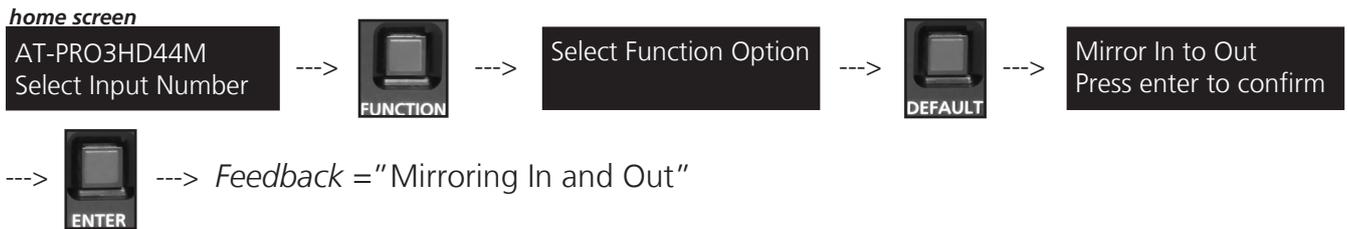
To **set** an input to an output

(I.E. Input 1 to output 2)



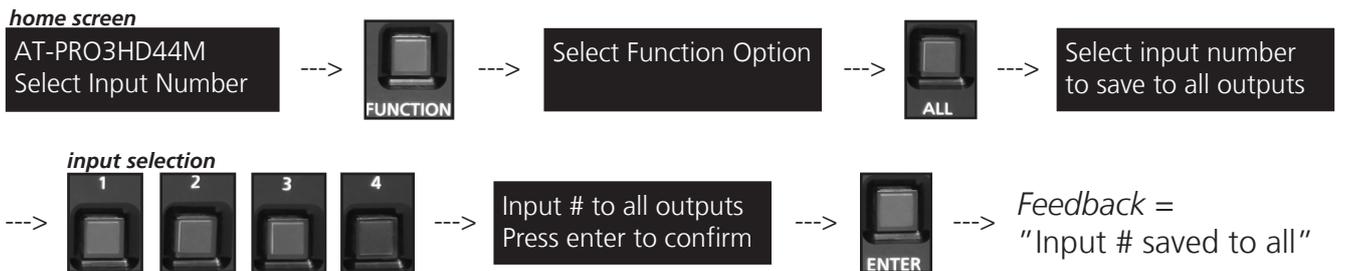
To **mirror** all inputs and outputs

(I.E. Input 1 to output 1, input 2 to output 2, etc.)



To **route** one input to all outputs

(I.E. Input 1 to output 1, 2, 3, and 4)



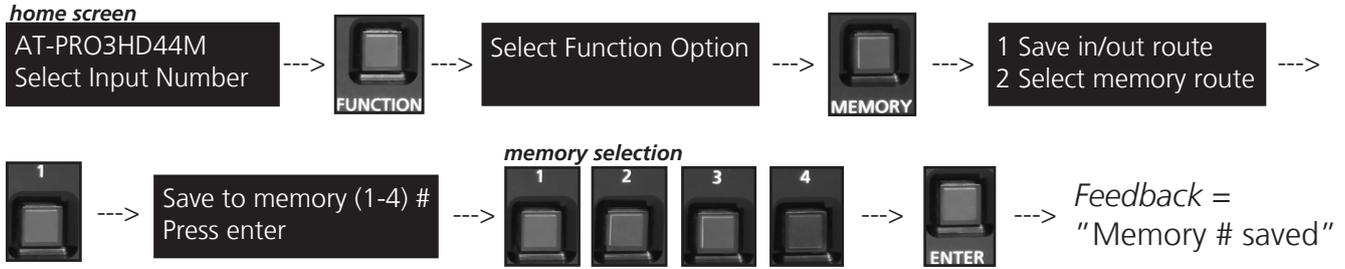
I/O Route Memory

Once inputs and outputs have been set they can be saved to memory and recalled later. Up to 4 individual input/output routes can be saved. The route will remain in memory until a new route has been saved to that memory number or the matrix has been factory reset.

example route

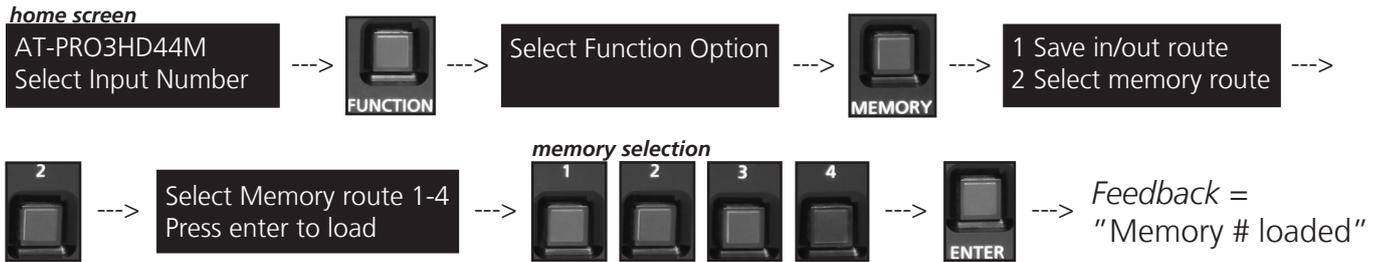
```
O: 1 2 3 4
I: 4 2 1 3
```

To **save** an I/O route to memory



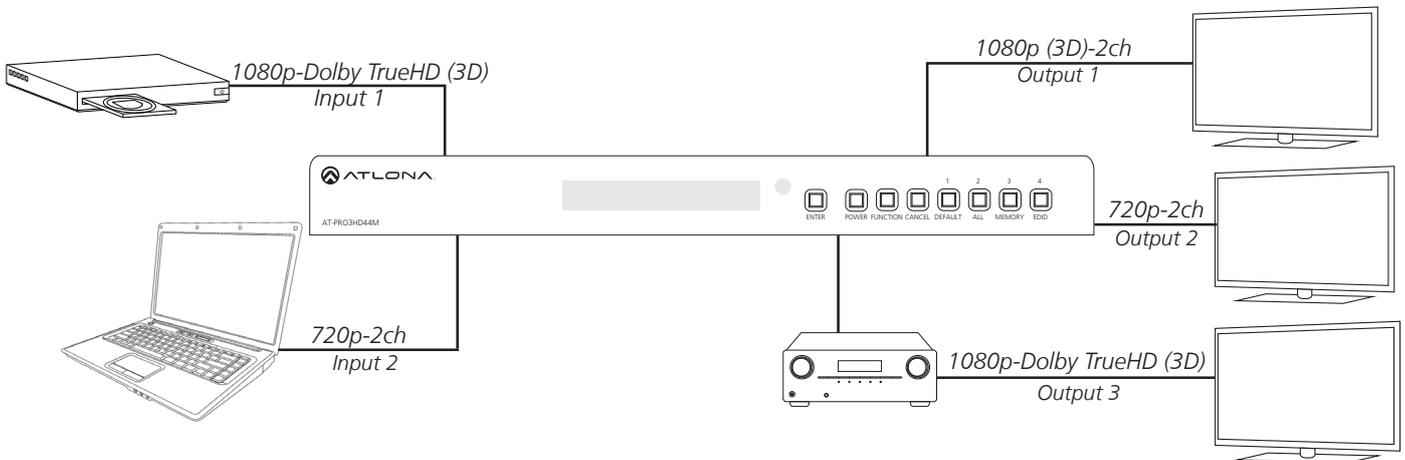
To **load** a saved I/O route

Once an input/output route has been saved, it can be loaded at any time.



EDID Set Up

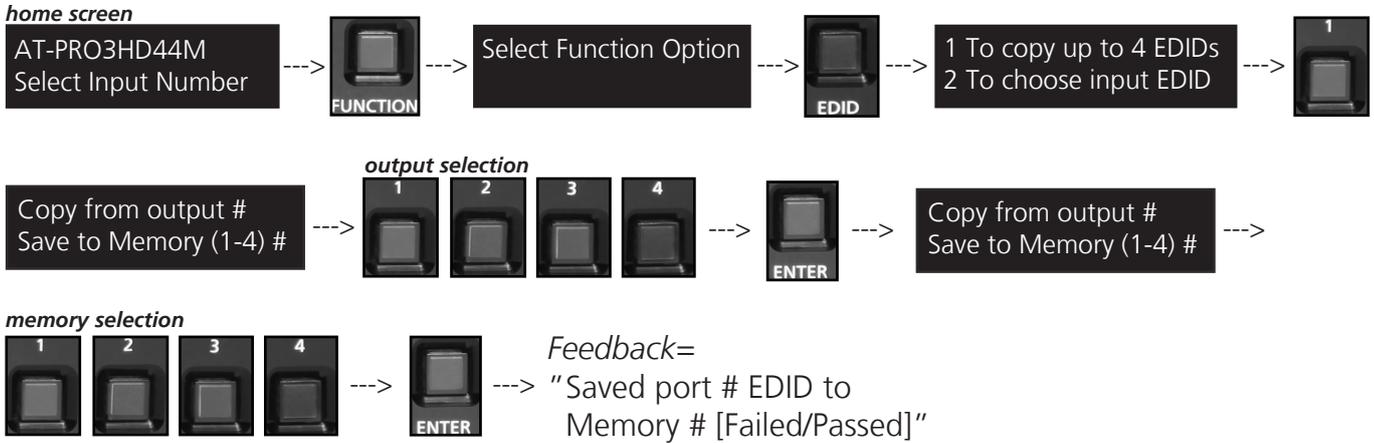
When the matrix is completely connected and turned on it will load the **default EDID**, which is the highest common native resolution of the devices. (i.e. In the diagram below the default would be 720p with 2ch audio. **Multi-channel audio and 3D are not enabled on internal mode, unless all devices have these features.**)



On default, all devices in the diagram will work at 720p. If a device is not syncing or a different resolution is required, internal EDID or EDID copy and load should resolve these issues. The PRO3HD can copy up to 4 EDIDs to memory.

Step 1: copy an EDID

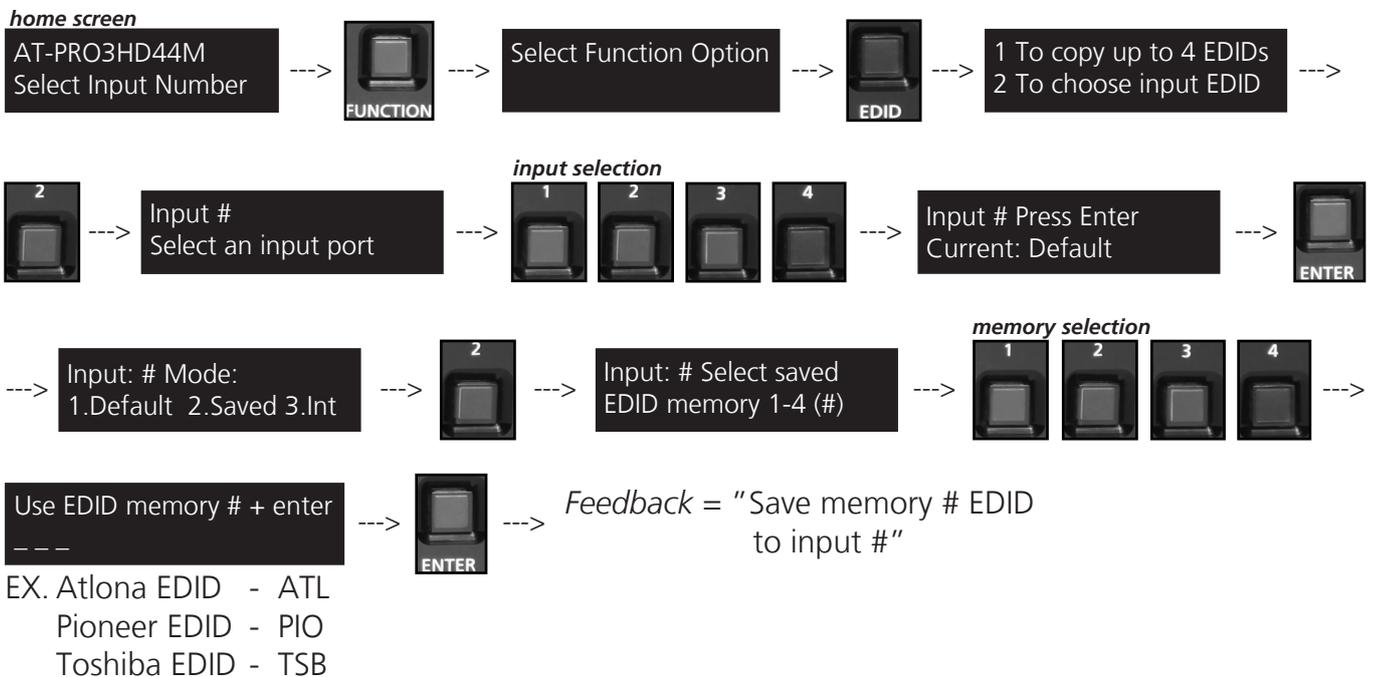
Before an EDID can be loaded to an input, it must first be copied to the matrix's memory. Each display's EDID can be saved individually to one of the matrix's four preset EDID memories.



Step 2: load a copied EDID onto an input

Once EDIDs have been copied to memory they can be loaded to a specific input.

Note: (refer to the diagram on page 9) Using the EDID of output 3 with input 1 will enable 1080p, 3D, and Dolby TrueHD to pass. Output 2 will receive no audio or video and output 1 will receive no audio with these settings.



Step 3: Load an internal EDID on an input

If the first two steps don't produce the correct resolution or audio configuration, the twelve internal EDIDs should resolve the issue.

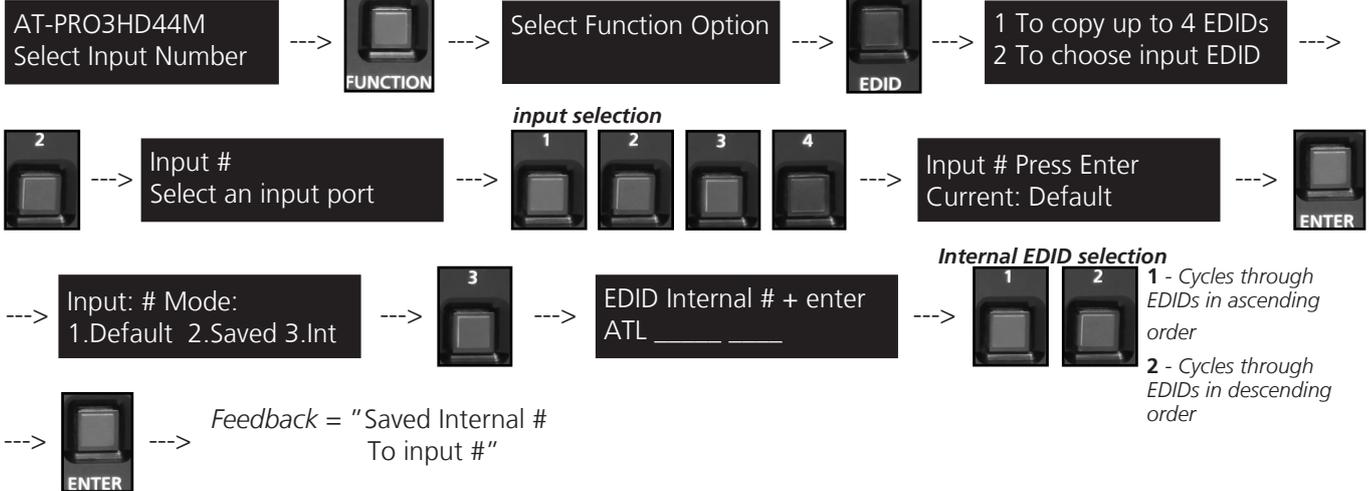
<i>Internal EDID options</i>	<i>Front panel display readout</i>
EDID 1: 1080P 2CH audio	ATL 1080P 2CH
EDID 2: 1080P multichannel audio*	ATL 1080P Multi CH
EDID 3: 1080P Dolby Digital/DTS 5.1**	ATL 1080P DD
EDID 4: 1080P 3D 2CH audio	ATL 1080P 3D 2CH
EDID 5: 1080P 3D Multi Channel Audio*	ATL 1080P 3D Multi CH
EDID 6: 1080P 3D Dolby Digital/DTS 5.1**	ATL 1080P 3D DD
EDID 7: 720P 2CH audio	ATL 720P 2CH
EDID 8: 720P Dolby Digital/DTS 5.1**	ATL 720P DD
EDID 9: 1280x800 RGB 2CH Audio	ATL 1280x800 RGB 2CH
EDID 10: 1366x768 RGB 2CH audio	ATL 1366x768 RGB 2CH
EDID 11: 1080P DVI***	ATL 1080P DVI
EDID 12: 1280x800 DVI***	ATL 1280x800 RGB DVI

* Recommended EDID for use of an AVR

** Recommended EDID for use of the S/PDIF audio de-embedding

*** Recommended EDID for use of DVI projectors

home screen



RS-232 commands:

To access the different EDIDs through RS-232 the following commands must be used.

Command	Feedback	Description
EDIDMSetX default	EDIDMSetX default	Sets the EDID of an input to the default EDID Ex. EDIDMset2 default - sets input 2 to default
EDIDMSetX saveY	EDIDMSetX saveY	Sets the EDID of an input to the previously saved EDID memory Ex. EDIDMset1 save3 - sets input 1 to the EDID memory 3
EDIDMSetX intZ	EDIDMSetX intZ	Sets the EDID of an input to one of the internal EDIDs Ex. EDIDMset3 int6 - sets input 3 to the internal EDID - 1080p 3D Dolby Digital 5.1

Matrix Status

When installing or troubleshooting it's important to verify settings, or be able to come back to a project and see how it was set up. The AT-PRO3HD44M matrix settings are viewable through the front panel display. View current I/O settings, firmware version, FPGA version, and the baud rates of not just the matrix but extenders as well.

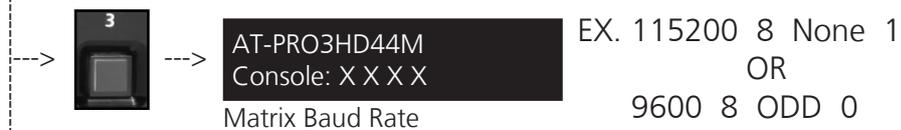
View current I/O settings

home screen



View Firmware/Baud Rate settings

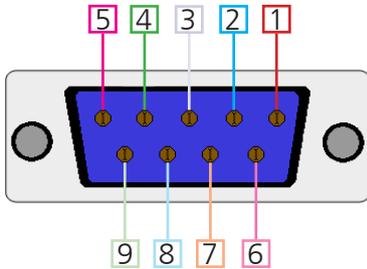
home screen



RS-232

Connection

RS-232 is connected through a 9-pin female DB connector. Only pins 2, 3, and 5 are terminated.



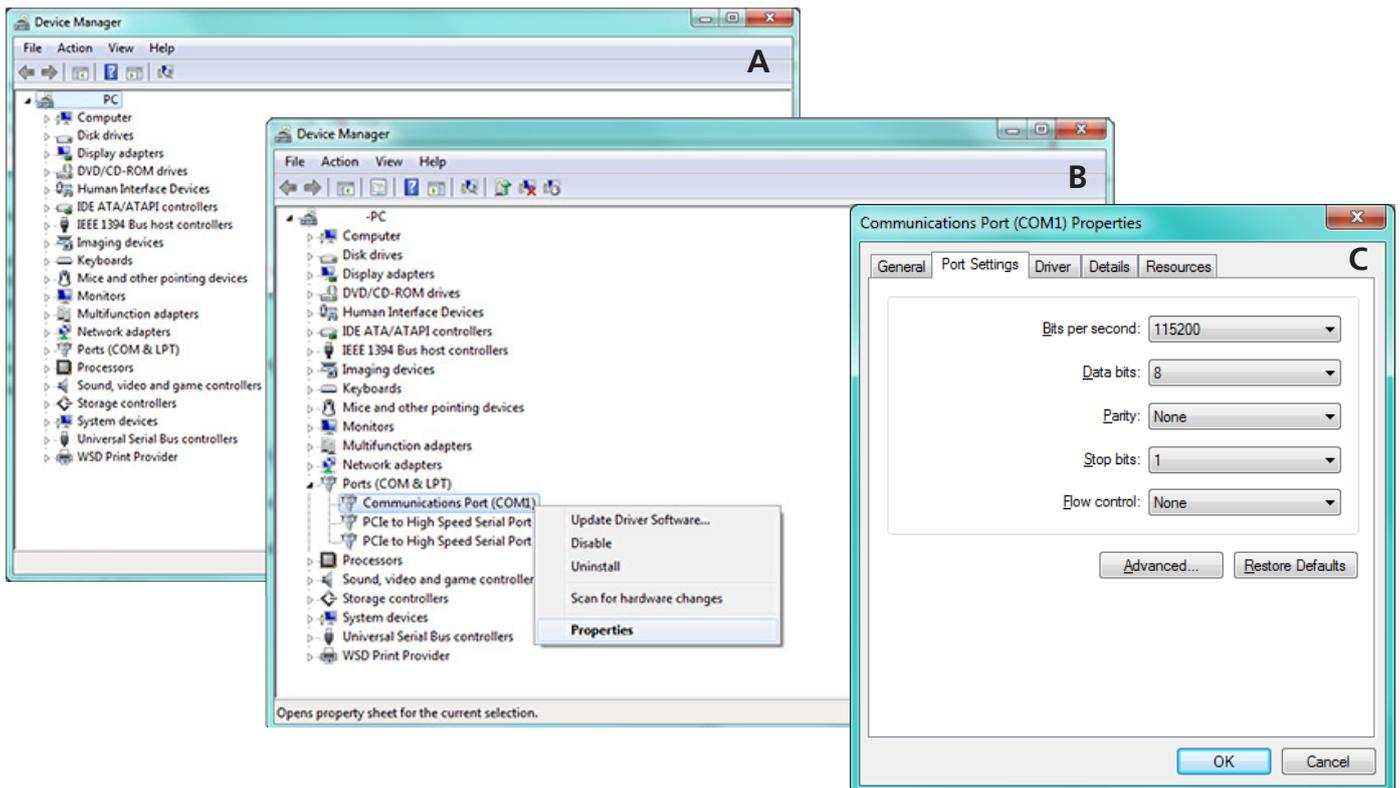
No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Set Up

To set up the RS-232 hyperterminal (if not using 3rd party software) use the following steps:

1. Connect the matrix to a PC using a 9pin to 9pin cable
2. Go to the Device manager folder (see picture A)
3. Find the Matrix COM port and right click with a mouse and select properties (see picture B)
NOTE: If unsure which COM port is the matrix, unplug the 9pin cable and plug it back in. It will disappear and reappear on the COM port list.
4. Under the properties menu select the port settings tab and update the menu to the **matrix default settings of**: Bits Per Second: 115200, Data Bits: 8, Parity: None, Stop Bits: 1 and Flow Control: None. (see picture C)

Set up is done and any hyperterminal program may be used to control the matrix now.



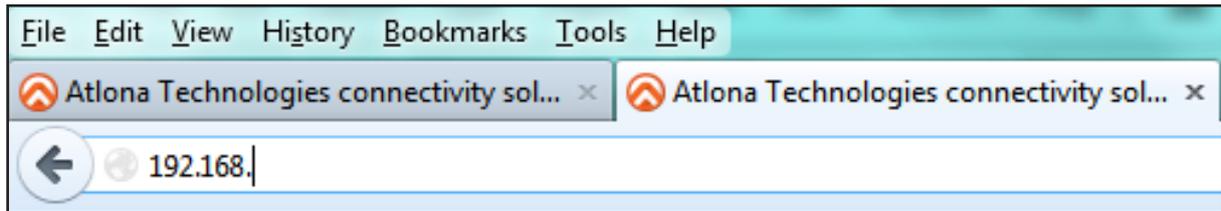
TCP/IP

For convenience, the matrix comes with DHCP default on. This enables the matrix to be connected to a network or network device with no worries of the matrix IP overriding another device.

TCP/IP WebGUI

Atlona has created an easy to use WebGUI for changing settings and controlling the matrix.

To begin, plug a LAN cable into the matrix and your network, then type the IP address of the matrix into a web browser (as seen below).



To find the matrix IP:

home screen

AT-PRO3HD44M
Select Input Number



Select Function Option

Hold for
5 seconds



AT-PRO3HD44M
FW Ver: 0.3.XX



AT-PRO3HD44M
IP X.X.X.X
IP Address

EX. 192.168.000.200

Important: If any stability issues are experienced, disable any anti-virus or firewall that may be interfering with network communication to the Matrix. Once set up is done and the matrix GUI is no longer being used, the firewall and anti-virus can be re-enabled.



AT-PRO3HD44M Login

Please input username and password.

Username:
Password:

[Login](#) [Clear](#)

A login screen will appear (this is the same log in for admin and general users). For the first log in (and future admin changes) the username is "root" and password is "Atlona".

Note: Only the admin password can be changed (see page 18). The username will always remain "root".

The home screen tab will display the general system information. If the matrix is powered off the FPGA will not display (see first image). Once the power is on it will display (see second image).

Note: When the matrix is turned off many fields within the WebGUI will not display information. Be sure the matrix is powered on for complete access.

ATLONA		AT-PRO3HD44M	
<u>Home</u>		<u>Network Setup</u>	<u>Status/Setting</u>
Model:	AT-PRO3HD44M		
Firmware Version:	0.3.17		
FPGA Version:	Please turn on the power		
Hardware Version:	A		
MAC Address:	B8-98-B0-00-00-00		

ATLONA		AT-PRO3HD44M	
<u>Home</u>		<u>Network Setup</u>	<u>Status/Setting</u>
Model:	AT-PRO3HD44M		
Firmware Version:	0.3.17		
FPGA Version:	0.5.00		
Hardware Version:	A		
MAC Address:	B8-98-B0-00-00-00		

ATLONA		AT-PRO3HD44M Setup	
<u>Home</u>	Network Setup	<u>Status/Setting</u>	
DHCP	<u>ON</u>	OFF	
IP Address	<input type="text" value="192.168.000.200"/>		
Subnet	<input type="text" value="255.255.255.000"/>		
Gateway	<input type="text" value="192.168.000.001"/>		
Telnet Port	<input type="text" value="23"/>		
Login Mode	<u>ON</u>	OFF	

The network set up page will allow the IP information to be changed. When a change is made the screen will grey and the ability to save or cancel will display at the bottom (see below).

Note: When DHCP is on, the IP cannot be configured. Turn DHCP off to enable IP configuration.

Note: For a stable connection, when using a control system it is best to set up a static IP.

ATLONA		AT-PRO3HD44M Setup	
<u>Home</u>	Network Setup	<u>Status/Setting</u>	
DHCP	<u>ON</u>	OFF	
IP Address	<input type="text" value="192.168.000.200"/>		
Subnet	<input type="text" value="255.255.255.000"/> x		
Gateway	<input type="text" value="192.168.000.001"/>		
Telnet Port	<input type="text" value="23"/>		
Login Mode	<u>ON</u>	OFF	
		<u>Save Setting</u>	<u>Cancel</u>

Note: Be sure to save all changes before moving to the next page

Login Mode has been added to provide a secure telnet login. Once Login Mode has been turned on a username and password will be required on all IP connections to the matrix.

Note: Login Mode should not be used when using a control system.

Note: The username and password used in IP Login Mode will be the same login information as the WebGUI

The config page under status/setting will allow power to be turned off/on, the front IR window to be turn off/on (see page 4), and the matrix and zone baud rates to be changed (see page 23-24).

ATLONA **AT-PRO3HD44M Config**

Home
Network Setup
Status/Setting

CONFIG
I/O
EDID
HDCP

Power **ON** **OFF**

IR **ON** **OFF**

Factory Default Reset All Parameters

No.	Baudrate	Databit	Parity	Stopbit
Matrix	115200	8 Bits	None	1 Bit
Port 1	9600	8 Bits	None	1 Bit
Port 2	9600	8 Bits	None	1 Bit
Port 3	9600	8 Bits	None	1 Bit
Port 4	9600	8 Bits	None	1 Bit

A grey screen will display the save and cancel options when making changes. Remember to save all settings before moving on to the next page.

Note: All like fields can be changed during one edit.

ATLONA **AT-PRO3HD44M Config**

Home
Network Setup
Status/Setting

CONFIG
EDID
HDCP

Power **OFF**

IR **OFF**

Factory De All Parameters

No.	Baudrate	Databit	Parity	Stopbit
Port 1	9600	8 Bits	None	1 Bit
Port 2	9600	8 Bits	None	1 Bit
Port 3	9600	8 Bits	None	1 Bit
Port 4	9600	8 Bits	None	1 Bit

Save Setting
Cancel

Note: This part of the config page will display for the admin only.

Adding, deleting, and updating users can also be done from the config page. User changes can only be done by the admin. Admin user name is always "root" and default password is "Atlona".

Note: Only the admin password can be changed. The username will always remain "root"

No.	Username	Password	Delete
User 1			Delete
User 2			Delete
User 3			Delete

Change user name and password:	
Old user name and password	
Username	<input type="text"/>
Password	<input type="text"/>
New user name and password	
Username	<input type="text"/>
Password	<input type="text"/>
PW again	<input type="text"/>

Note: Always remember to save settings before moving to the next page

No.	Username	Password	Delete
User 1	Atlona	Matrix	Delete
User 2	Pro3	RS-232	Delete
User 3			Delete

Change user name and password:	
Old user name and password	
Username	<input type="text" value="root"/>
Password	<input type="text" value="Atlona"/>
New user name and password	
Username	<input type="text" value="root"/>
Password	<input type="text" value="*****"/>
PW again	<input type="text" value="*****"/>

The I/O page allows input and output routes to be changed easily by drop down menu. Output All will route one selected input to all the outputs.

 **AT-PRO3HD44M Status**

Home	Network Setup	Status/Setting
CONFIG	I/O	HDCP

	Output 1	Input 2
	Output 2	Input 1
	Output 3	Input 1
	Output 4	Input 1
	Output All	None

Note: All routes can be changed while in the grey edit screen. Remember to save after all changes have been made.

 **AT-PRO3HD44M Status**

Home	Network Setup	Status/Setting
CONFIG	I/O	HDCP

	Output 1	Input 2
	Output 2	Input 3
	Output 3	Input 3
	Output 4	Input 1
	Output All	None

[Save Setting](#)
[Cancel](#)

For compatibility and ease of use, EDID configuration has been added. Each input has a drop down selection for internal, default, and saved EDIDs (see pages 9-11 for EDID information).

Note: When saving an EDID to memory through the WebGUI, the output will save to the corresponding memory. **Ex.** Output 2 will only save to Memory 2

ATLONA AT-PRO3HD44M EDID				
Home		Network Setup		Status/Setting
CONFIG		I/O	EDID	HDCP
Input	Input EDID	Output	Display's EDID	Save Display's EDID to:
Input 1	ATL 1080P 2CH	Output 1	E3D420VX	Memory 1
Input 2	ATL 1080P 2CH	Output 2	No connection	Memory 2
Input 3	ATL 1080P 2CH	Output 3	SONY TV	Memory 3
Input 4	ATL 1080P 2CH	Output 4	SAMSUNG TV	Memory 4

Internal EDIDs (see page 11) provide 12 options for video and audio to ensure compatibility and reliability.

Auto default mode will choose the highest common video resolution and audio format that is supported by all outputs.

Each EDID saved to memory will be noted as MM and the number of its output.

**Clicking on the Display's EDID link will provide a breakdown of the selected output's EDID

Note: MM#s in the picture above are examples of saved EDIDs

Note: Remember to save after all changes to ensure complete compatibility.

ATLONA AT-PRO3HD44M EDID				
Home		Network Setup		Status/Setting
CONFIG		I/O	EDID	HDCP
Input	Input EDID	Output	Display's EDID	Save Display's EDID to:
Input 1	ATL 1080P 2CH	Output 1	<u>E3D420VX</u>	Memory 1
Input 2	<u>ATL 1080P 2CH</u>	Output 2	No connection	Memory 2
Input 3	ATL 1080P Multi CH	Output 3	<u>SONY TV</u>	Memory 3
Input 4	ATL 1080P DD	Output 4	<u>SAMSUNG</u>	Memory 4
	ATL 1080P 3D 2CH			
	ATL 1080P 3D Multi CH			
	ATL 1080P 3D DD			
	ATL 720P 2CH			
	ATL 720P DD			
	ATL 1280x800 RGB 2CH			
	ATL 1366x768 RGB 2CH			
	ATL 1080P DVI			
	ATL 1280x800 RGB DVI			
	Default			
	(MM1)E3D420VX			
	(MM2)Unknown			
	(MM3)SONY TV			
	(MM4)SAMSUNG TV			

The HDCP page will display the output's ability to support HDCP content or not.

Several messages will appear under different circumstances:

Supported - HDCP is supported by the display

Not Supported - The display is unable to support HDCP

Non-HDCP Source - A source that does not support HDCP

No connection - If no source is selected/connected, HDCP status cannot be determined

ATLONA		AT-PRO3HD44M HDCP	
Home		Network Setup	
CONFIG		I/O	EDID
		HDCP	
	Output 1		Supported
	Output 2		No connection
	Output 3		Non-HDCP Source
	Output 4		Supported

RS-232 & TCP/IP Control Commands

The command codes are case sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
PWON	PWON	Power on
PWOFF	PWOFF	Power off
PWSTA	PWx	Will display the power status of the matrix (ex. Power is on = PWON)
Version	(Firmware #)	Brings up the current firmware version
Type	(Model #)	Brings up the model information
Lock	Lock	Locks the front panel of the matrix so no buttons are active
Unlock	Unlock	Unlocks the front panel of the matrix, enabling the buttons again
All#	x1AVx1,x2AVx2,...	Resets all inputs to corresponding outputs (in3 to out3)
x1\$	x1\$	Turns off output channel (to turn off output 3 = x3\$)
x1All	x1All	Sets selected input to all outputs (x3All would set input 3 to all)
x1AVx2	x1AVx2	Switch input to output (input 3 to output 2 = x3AVx2)
x1AVx2,x3,x4	x1AVx2,x3,x4	Switch input to multiple outputs (input 3 = x3AVx1,x2)
IRON	IRON	Turns on the IR receiver
IROFF	IROFF	Turns off the IR receiver
Statusx1	x7AVx1	Shows what input is connected to selected output
Status	x1AVx1,x2AVx2, x3AVx4,	Displays which inputs are currently connected to which outputs
SaveY (ex. Save2)	SaveY (ex. Save2)	Saves settings for future use, preset options 0 to 4
RecallY (ex. Recall2)	RecallY (ex. Recall2)	Recalls saved settings for the number you selected
ClearY (ex. Clear2)	ClearY (ex. Clear2)	Erases the save for the number you selected
Mreset	Mreset	Sets matrix back to the default settings
RS232zoneX[command]	RS232zoneX[command]	Send commands to devices connected to the receiver RS-232 ports. Commands are the same as the ones stated in this table. X = zone number
ex: RS232zone1[PWON]	ex: RS232zone1[PWON]	example: Turning the power on for the device connected in zone 1

Each command or feedback is terminated with a carriage return.

Note: If the command fails or is incorrect the feedback should be "Command FAILED"

TCP/IP Commands

Command	Feedback	Description
IPCFG	IP Addr : x.x.x.x Netmask : x.x.x.x Gateway : x.x.x.x IP Port: x.x.x	Displays IP address configuration
IPTimeout XX	IPTimeout XX (Ex. IPTimout120)	Determines amount of seconds of inactivity before TCP/IP disconnects
IPQuit	IPQuit	Logs out of TCP/IP
IPAddUser	TCP/IP username & password list: - user password - user password - user password	Will display a list of users
IPAddUser [X] [Y]	TCP/IP user was added	Add a user for TCP/IP control. X=User Y=Password Ex. IPAddUser Atlona 1234 (User=Atlona 1234=Password)

TCP/IP Commands Cont.

IPDelUser [X]	TCP/IP user was deleted	Delete a user from TCP/IP X=User (Ex. IPDelUser Atlona)
IPDHCP sta	IPDHCP sta Ex. IPDHCP on	Displays the status of DHCP
IPDHCP on	IPDHCP on	Turns DHCP on
IPDHCP off	IPDHCP off	Turns DHCP off
IPStatic [X] [Y] [Z]	IPStatic address netmask gateway	Sets a static IP address Ex. IPStatic 192.168.1.1 255.255.255.0 192.168.1.200
IPPort	IPPort Y	Set the TCP/IP port (ex. IPPort 230)
IPLogin sta	IPLogin sta Ex. IPLogin on	Displays IPLogin status
IPLogin on	IPLogin on	Enables IPLogin
IPLogin off	IPLogin off	Disables IPLogin
Broadcast sta	Broadcast sta	Displays broadcast mode status
Broadcast on	Broadcast on	Enables broadcast mode
Broadcast off	Broadcast off	Disables broadcast mode

Baud Rate

Default baud rates of the matrix and receivers have been set for the best compatibility with other devices (i.e. projectors). Baud rates should not be changed unless an incompatibility occurs.

To change the baud rate of the matrix or the receiver (AT-PRO3HDREC) an RS-232 hyperterminal will be needed. Once the RS-232 hyperterminal is set up changing the baud rate will be done with a command line. **The baud rate for the matrix is for matrix control and the output baud rate is for control of the RS-232 device in the zone being controlled.**

Note: Baud rate options 2400, 4800, 9600, 19200, 38400, 57600, or 115200

Command for Matrix baud rate

CSpara[baudrate,data-length,parity,stop-bit] (data, parity, and stop for matrix must be 8,0,1)

For example if you wish to change the baud rate to 38400 the command would look like this:

CSpara[38400,8,0,1]

Note: Default for the matrix is: Baud-115200bps, Data length-8bit, Parity-None, Stop Bit-1

RS-232 Command for the Output baud rate status

RS232para

The RS-232 status command will provide feedback for the current parameters for each output.

Example: (See example of feedback below)

RS232para

Current RS232 parameter:

- Port 1 :BaudRate 2400bps, DataBits 0, Parity None, StopBits 1.
- Port 2 :BaudRate 9600bps, DataBits 0, Parity ODD, StopBits 1.
- Port 3 :BaudRate 9600bps, DataBits 0, Parity None, StopBits 1.
- Port 4 :BaudRate 9600bps, DataBits 0, Parity None, StopBits 1.

Note: Default for the outputs is: Baud-9600bps, Data length-8bit, Parity-None, Stop Bit-1

The ability to check baud rate status on the outputs will help to identify control compatibility for in zone RS-232 devices.

Command for Output (receiver) baud rate

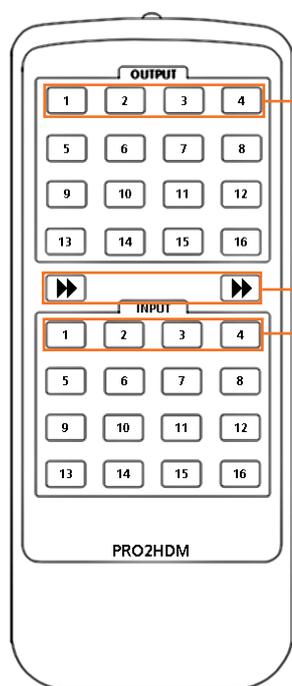
RS232paraX[baudrate,data-length,parity,stop-bit]

X represents the zone# (output#), the data length must be 7 or 8, parity bit will be 0 for none, 1 for odd, 2 for even, and the stop-bit must be 1 or 2.

For example if you wish to change the baud rate to 19200, data length 8, ODD parity, and 1 stop-bit on the receiver in zone 3 to 19200 the command would look like this:

RS232para3[19200,8,1,1]

Remote Control



Output selection. Numbers correspond with the category cable outputs (1-4) on the matrix.

Arrow buttons are not functional for this product.

Input selection. Numbers correspond with the HDMI inputs (1-4) on the matrix.

Updating and Resetting

Updating firmware

Atlona has made field firmware updating easy. Simply download firmware from Atlona.com and upload the file to the matrix.

NOTE: Only use a Windows computer to update the matrix. Use of an Apple computer to update will cause the matrix to be unusable until the update is redone with a Windows computer.

Needs:

- Verify the current firmware version
- RS-232 9 Pin to 9 Pin cable.
- PC (not compatible with MAC)
- OS that supports USB mass storage devices
- USB A to USB B cable

To **view** the current firmware use RS-232 command "**Versio**n".

Preparing the Matrix:

- Unplug the power cable.
- Hold the Cancel button while plugging the power back in.
- Connect the USB B to USB A cable into the Matrix and the Computer.

Updating the Matrix:

The computer should auto detect the connection, if it does not, open the USB device from "my computer".

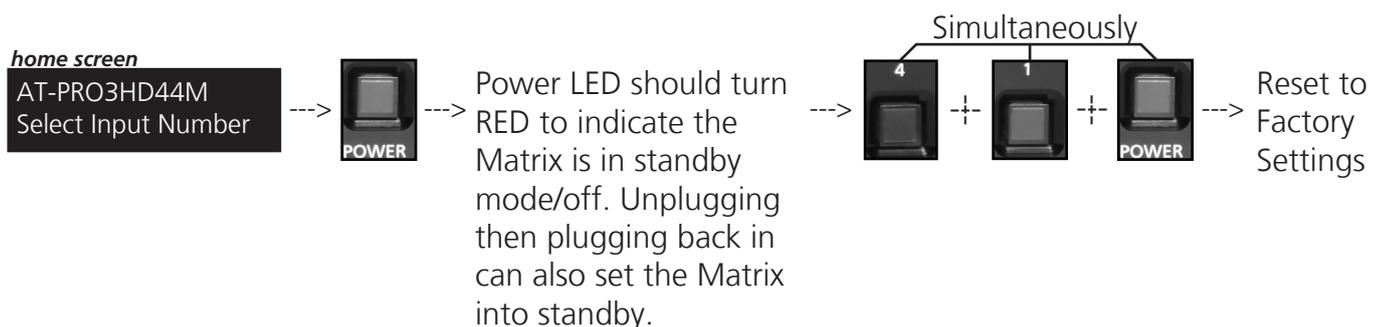
- Click open in a new folder. (if auto run detects connection)
- Delete the file in the folder. (there should be only one file, if more, delete all files)
- Copy and Paste the new firmware file into the USB folder.
- Unhook the Matrix from the computer.
- Unplug the power cable from the AT-PRO3HD44M
- Plug the power back in and start the matrix normally. Your update should be complete

If you wish to verify the new firmware, use the RS-232 command "**Versio**n".

Resetting to factory settings

Atlona understands that settings can be troublesome and at times its just easier to set things back to factory settings. To make things easier a simple one step reset was created.

To reset the matrix, hold down the buttons 1 and 4 while powering on. If successful the matrix will be back to factory settings when it turns on.



Specifications

Bandwidth	6.75Gbps	
Ports	Video input 4 x HDMI Video output 4 x RJ45 Audio output 4 x S/PDIF IR input 5 x 3.5mm IR output 5 x 3.5mm Control: RS-232 1 x 9pin (RS-232) Control: TCP/IP 1 x RJ45 Firmware update 1 x USB B	
Power Consumption	60W	
Audio	Passes up to Dolby TrueHD or DTS-HD Master Audio	
Distance	230ft (70m) @ 1080p over CAT6a/7 197ft (60m) @ 1080p over CAT5e/6	
Resolution	Video: up to 1080p@60Hz VESA: up to 1920x1200	
Dimensions	1.69 x 17.13 x 10 (inch) 42.93 x 435.10 x 254 (mm)	
Weight	7 lbs 3.18 kg	
Rack Size	1 U, 19 in. standard electronics rack	
Temperature	Operating 32°F to 104°F 0°C to 40°C	Storage 4°F to 140°F 20°C to 60°C
Certifications	CE, FCC, RoHS, cULus for power supplies	

Safety Information

Safeguards



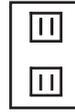
To reduce the risk of electric shock, do not expose this product to rain or moisture



Do not modify the wall plug. Doing so will void the warranty and safety features.



If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.



This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your product. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Atlona, Inc. ("Atlona") Limited Product Warranty Policy

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- A) repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping
- OR**
- B) replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products
- OR**
- C) refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona's products is the purchaser's exclusive remedy and Atlona's liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona's products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona's Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser's sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013
- Lifetime Limited Product Warranty for all cable products

Limited Product Warranty Terms – Refurbished (B-Stock) Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) hardware and electronic products purchased on or after June 1, 2013

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona.com for Atlona's contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408-962-0515 (US/international) or via Atlona's website at www.atlona.com.

Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packing or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.
- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona's products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona's products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a "Consumer Product" under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona's Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona's authorized distributors, dealers and resellers can be found at www.atlona.com.

Atlona, Inc Product Registration

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: <http://www.atlona.com/registration>