

# 4K HDR HDBaseT Matrix Switcher



## Version Information

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Version	Release Date	Notes
1	May 2025	Factory Release

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## Operating Notes

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As of this writing, there are no firmware updates for this product. When new firmware is released, update instructions will be included with the firmware and will be appended to this manual.



**IMPORTANT:** Visit <https://atlona.com/product/at-hdr-mx1616> for the latest firmware updates and User Manual.

## Warranty

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To view the product warranty, use the following link or QR code:

<https://atlona.com/warranty/>.

## Important Safety Information



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT OPEN ENCLOSURE OR EXPOSE TO RAIN OR MOISTURE. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.



The information bubble is intended to alert the user to helpful or optional operational instructions in the literature accompanying the product.

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this product near water.
- 6 Clean only with a dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
- 11 Only use attachments/accessories specified by Atlona.
- 12 To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
- 13 Unplug this product during lightning storms or when unused for long periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.



## FCC Compliance

FCC Compliance and Advisory Statement: This hardware 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. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or 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: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

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## Introduction

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The Atlona AT-HDR-MX1616 is a 16x16 HDMI® to HDBaseT™ matrix switcher for high dynamic range (HDR) formats. It is HDCP 2.2 compliant, supports 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, and data rates up to 18 Gbps.

The HDR-MX1616 enables flexible routing of 16 HDMI input signals to 16 HDBaseT outputs that support transmission of video, audio, Ethernet, control signals, and power up to 330 feet (100 meters) over CAT6A cable. Each HDBaseT output also has a mirrored HDMI output for connection to local display devices.

The built-in audio matrix routes up to 16 2CH PCM de-embedded audio sources to 16 unbalanced stereo analog outputs for integration with multi-zone audio distribution systems. Each audio output has independent volume and mute control.

The HDR-MX1616 provides TCP/IP, RS-232, and IR ports for control of the switcher itself. It also supports independent RS-232, IR, and CEC communications over each HDBaseT output for controlling remote displays and peripherals.

The HDR-MX1616 is housed in a 4U enclosure with active cooling to ensure continuous reliability. It also provides remote power to compatible HDBaseT receivers.

## Features

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- 4K HDR matrix switcher with 16 HDMI inputs and 16 HDBaseT outputs.
- Each HDBaseT output has a mirrored HDMI output to support local display devices.
- 4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling.
- Features visually lossless compression with no latency to enable HDR and 4K/60 4:4:4 video signal extension over HDBaseT.
- HDCP 2.2 compliant.
- Supports HDR10, HLG, and Dolby Vision® HDR formats.
- HDBaseT outputs extend 4K HDR video, multi-channel audio, Ethernet, control signals, and power up to 330 feet (100 meters) over Category 6A cable.
- Built-in audio matrix routes de-embedded audio sources to unbalanced stereo analog outputs with independent volume control for integration with zoned audio systems.
- Remotely powers compatible receivers over HDBaseT.
- Manages EDID communications between source and display devices with automatic, user defined, or preset configurations.
- Front panel button controls and display.
- Intuitive GUI-based configuration using integrated web server.
- Flexible control options via TCP/IP, RS-232, and IR with Atlona Velocity™ or third-party control systems.
- TCP/IP to RS-232 proxy for bi-directional serial communications through the receivers over HDBaseT.
- Supports automatic CEC display power controls as well as triggering by TCP/IP or RS-232 for both HDBaseT and mirrored HDMI for each output.
- Rack mountable 4U, full-rack width enclosure.

## Package Contents

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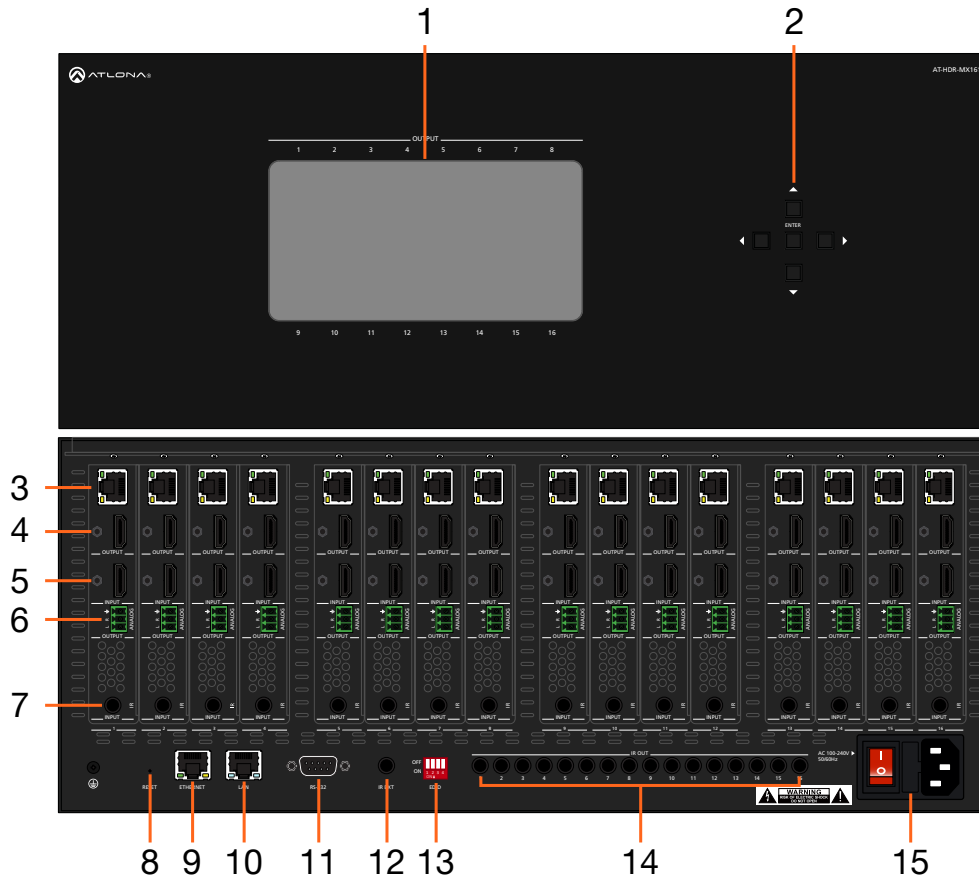
- 1 x AT-HDR-MX1616
- 16 x Captive screw connector, 3-pin
- 1 x IEC Cable
- 1 x Pair of mounting ears w/screws
- 4 x Feet w/screw
- 1 x Installation Guide

## Compatibility

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SKU	4K@60Hz	HDR	Ethernet pass through
AT-HDR-EX-100CEA-RX	X	X	X
AT-HDR-EX-70C-RX	X	X	
AT-UHD-EX-100CE-RX	X		X
AT-UHD-EX-70C-RX	X		

# Panel Description



## 1 Front Panel Display

Front panel display will show the on-screen menu for routing.

## 2 Selection Buttons

Use to route inputs and outputs via the OSD.

## 3 HDBaseT OUT

Connect PoE compatible receivers to this port.

## 4 HDMI OUT

Connect an HDMI display to this port. This port is mirrored and will display the same content as the HDBaseT OUT port.

## 5 INPUT

Connect an HDMI source to this port.

## 6 AUDIO OUT

Connect the included 3-pin captive screw connector between this port and an amplifier.

## 7 IR

Connect an IR receiver or control system to this port for remote device control.

## 8 Reset

Press and hold for 5 seconds to reset the IP mode to DHCP or press and hold for 15 seconds to reset the unit to factory settings.

## 9 ETHERNET

Connect an RJ45 cable to this port to a network switch or source for Ethernet pass through. When connected to a network switch, Ethernet will pass to compatible remote HDBaseT receivers.

## 10 LAN

Connect an RJ45 cable to this port for TCP/IP and Web Server control of the matrix.

## 11 RS-232

Connect to an RS-232 device or control system.

## 12 IR EXT

Connect to an IR Receiver for use with an IR remote.

## 13 EDID

Use to manually set the EDID mode for the unit.

## 14 IR OUT

Connect IR transmitters to these ports for local device control.

## 15 AC 100-240V 50/60Hz

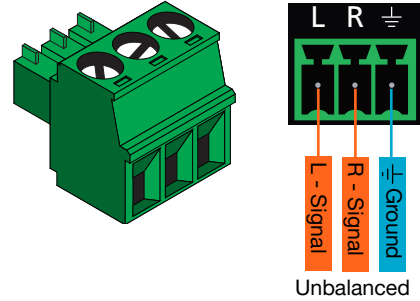
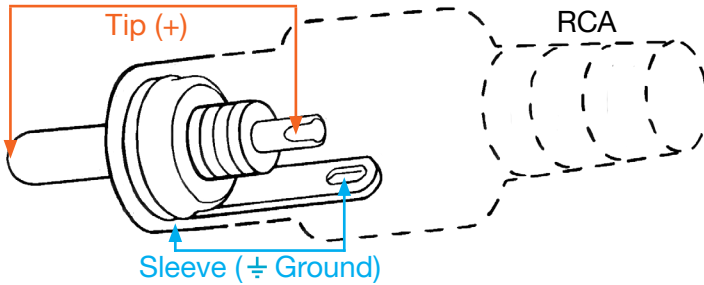
Connect the included IEC cable from this port to a wall to power the unit.



# Installation

## Audio

Connect to an audio DSP, amplifier, or other audio distribution or player devices. Only unbalanced connections may be used.



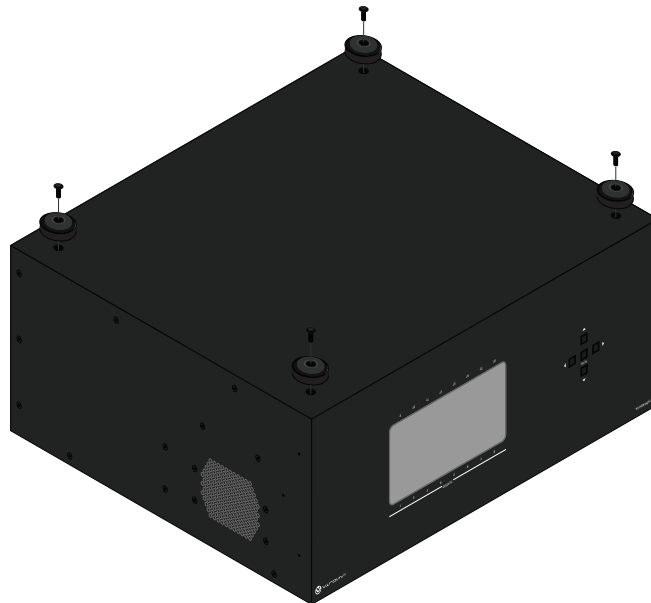
## Mounting Instructions

The AT-HDR-MX1616 can be placed freestanding on top of a desk, a table, or in a cabinet. To prevent damage to the surfaces or unnecessary movement of the matrix, four feet have been included.

### Surface mounting

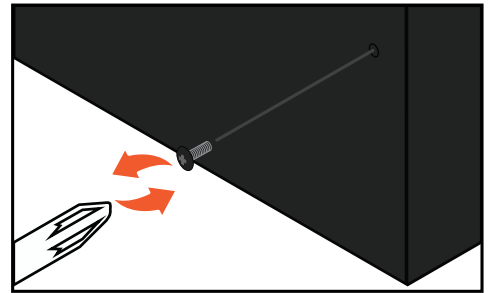
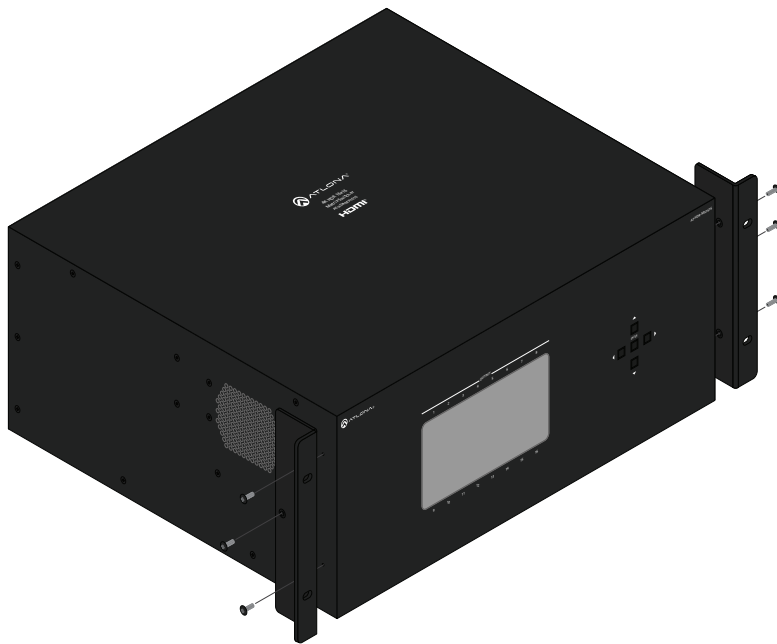
The AT-HDR-MX1616 can be placed freestanding on top of a desk, a table, or in a cabinet. To prevent damage to the surfaces or unnecessary movement of the matrix, four feet have been included.

- 1 Turn the unit upside down.
- 2 Install each foot using the included feet screws, the rubber grips of the feet should be facing up during installation.
- 3 Turn the unit right-side up and place it in the desired location.



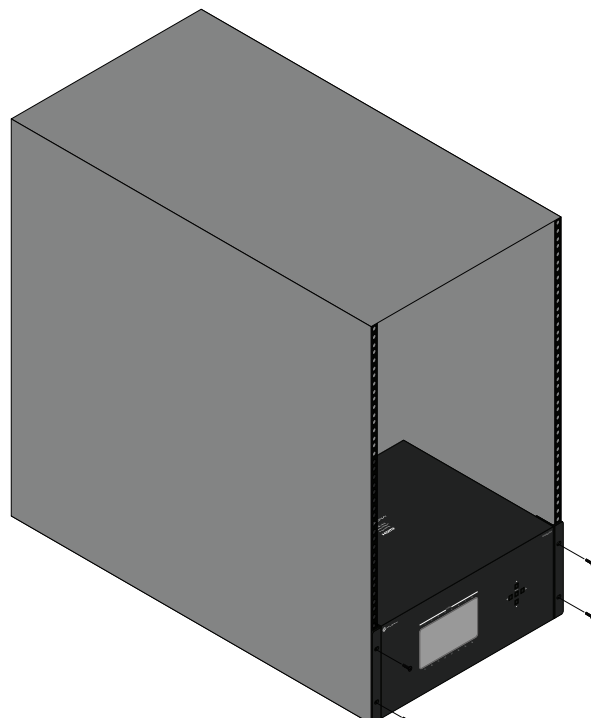
### Rack installation

- 1 \*Optional\* If the unit still has the feet on it, remove them before installing.
- 2 Attach the included rack ears to each side of the AT-HDR-MX1616 using the included mounting screws.
- 3 Install the HDR-MX1616 into a rack, using four rack screws.



**i NOTE:** Increase the air flow as needed to maintain the recommended temperature inside the rack.

**i NOTE:** Do not exceed the maximum weight loads for the rack. Install heavier equipment in the lower part of the rack for stability.



## Category Cable Guidelines

Refer to the tables below for recommended cabling when using Altona products with HDBaseT. The green bars indicate the signal quality when using each type of cable. Higher-quality signals are represented by more bars.

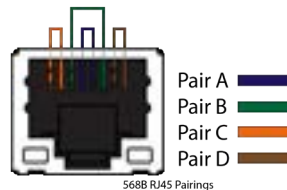
Core	Shielding	CAT5e	CAT6	CAT6a	CAT7
Solid	UTP (unshielded)	■	■■■	■■■■	
	STP (shielded)	■■	■■■■	■■■■■	■■■■■
Performance Rating (MHz)		350	500	600	800



**IMPORTANT:** Stranded or patch cables are not recommended due to performance issues. Shielded cables are strongly recommended to minimize signal noise and interference.

Resolution/Distance	Distance	Resolution
CAT 5e/6	100m/330ft	1080p@60Hz 4:4:4 10-bit
	70m/230ft	1080p@60Hz 4:4:4 12-bit 4K@60Hz 4:4:4 8-bit
CAT 6a/7	100m/330ft	1080p@60Hz 4:4:4 12-bit 4K@60Hz 4:4:4 8-bit

Use of a TIA/EIA 568B termination is recommended for optimal performance.



## Connection Instructions

- 1 Connect up to 16 HDMI sources to the HDMI input ports.
- 2 Connect up to 16 HDMI displays to the HDMI output ports.
- 3 Connect an RJ45 cable from a network switch to the LAN port for unit control and Web Server access.
- 4 Connect an RJ45 cable to the ETHERNET port for Ethernet data pass through to remote compatible HDBaseT receivers.
- 5 Connect up to 16 3-pin captive screw connectors from the analog audio out ports to a DSP, amplifier, or other audio distribution or player devices.
- 6 Connect up to 16 compatible HDBaseT receivers (e.g. AT-HDR-EX-100CEA-RX) to the HDBaseT output ports.
- 7 For control, connect IR receivers to the IR IN or IR Ext ports of the unit and IR transmitters to the IR OUT ports.

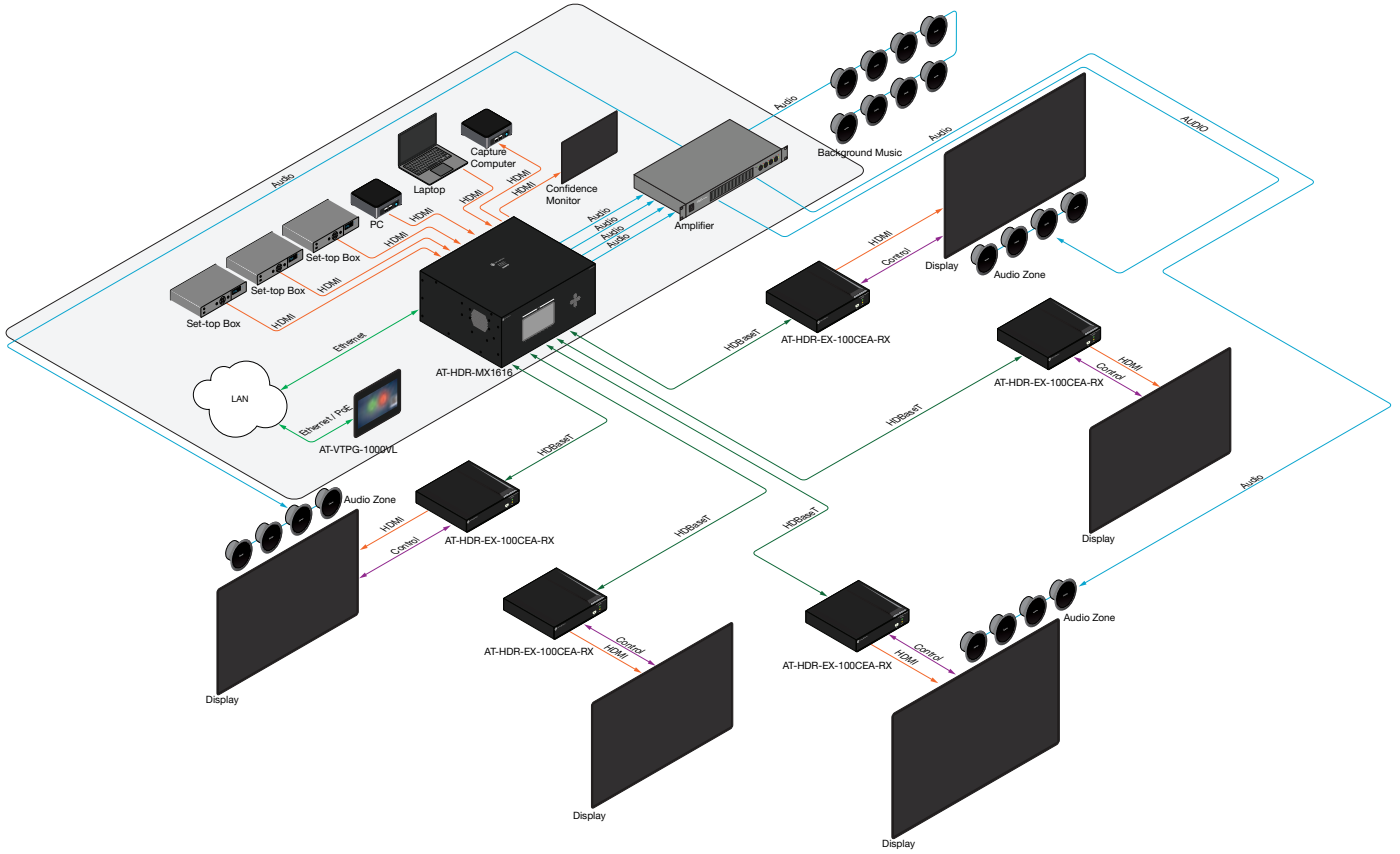


**NOTE:** IR IN 1 through 16 are bound with HDBaseT OUT 1 through 16.

**NOTE:** IR OUT 1 through 16 are bound with HDMI IN 1 through 16.

- 8 Connect a female DB9 RS-232 cable to this port for unit control.
- 9 Connect the included IEC cable from the AC 100-240V 50/60Hz port to an AC outlet.

**Connection Diagram**



# Control

## Front Panel

The unit has a front panel OSD and buttons to perform basic set I/O routing. See the [Front Panel](#) section for instructions.

## EDID Dip Switch

The unit has an EDID dip switch for manual control of the EDID. See the [EDID Dip Switch](#) section for instructions.

## CEC

The unit provides CEC display control. This can be set through the [CEC](#) section of the [Web Server](#), RS-232, or TCP/IP. CEC commands will pass through the HDMI Out port on the matrix or through the HDMI Out of the compatible HDBaseT receiver connected to the HDBaseT Out port. CEC must be enabled on the display. Refer to the display manual for instructions on how to enable it. Each manufacturer has their own brand name for CEC, use the chart below for clarification:

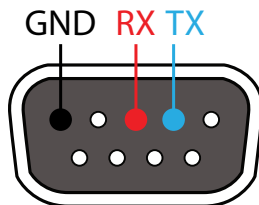
Manufacturer	CEC Designation
Hitachi	HDMI-CEC
LG	SIMPLINK
Philips	EasyLink
Samsung	AnyNet+
Sony	BRAVIA Sync
Toshiba	CE Link / REGZA Link
Visio	HDMI-CEC

## IR

The unit can be controlled through IR. It also supports bi-directional IR pass through communication for display control through the matrix side or source control from the remote receiver side. See the [IR](#) section for more information.

## RS-232

RS-232 control for connected devices and the unit are available through the RS-232 port. The commands can be found within the API at [https://atlona.com/pdf/AT-HDR-MX1616\\_API.pdf](https://atlona.com/pdf/AT-HDR-MX1616_API.pdf).



Pin out will be determined by the RS-232 device and connect as RX (receive), TX (transmit) and  $\perp$  (ground).

## TCP Proxy

This unit has the ability to translate IP data to RS-232 through ports 9001+. This enables control of devices through TCP/IP that only have RS-232 ports. The unit will take the commands sent to port 9001 through 9016 and send them to the corresponding HDBaseT OUT ports. More information and commands can be found within the API at [https://atlona.com/pdf/AT-HDR-MX1616\\_API.pdf](https://atlona.com/pdf/AT-HDR-MX1616_API.pdf).

## TCP/IP

TCP/IP control for connected devices and the unit are available through the LAN connection. The commands can be found within the API at [https://atlona.com/pdf/AT-HDR-MX1616\\_API.pdf](https://atlona.com/pdf/AT-HDR-MX1616_API.pdf).

## Web Server

The unit has a built in Web Server that will allow for unit configuration and device control. See the [Web Server](#) section for more information.

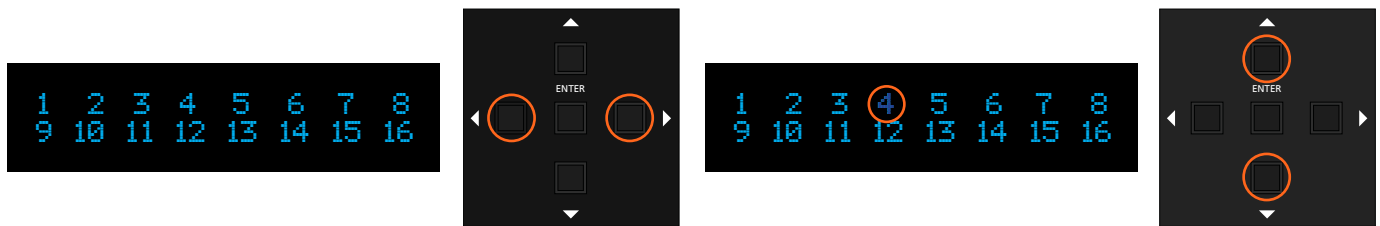
## Front Panel

The matrix has a front panel OSD and buttons to perform basic set I/O routing and view the IP address of the HDR-MX1616.

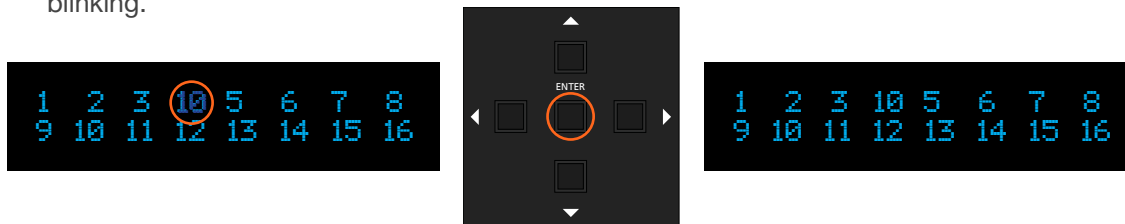
### I/O Routing

The front panel OSD will display the current routing of the selected inputs to outputs. By default, the matrix will route each input to the corresponding output (1 to 1, 2 to 2, etc).

- Select the ◀ or ▶ buttons to start navigating the outputs. The currently selected output will be blinking.
- Once on the output to be changed, use the ▲ and ▼ buttons to select the input.



- Once the correct input number is showing, press the ENTER button to lock the input in. The number will stop blinking.



- Repeat as many times as needed for full routing.

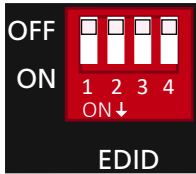
### IP Address

The front panel OSD will display the current IP address of the unit.

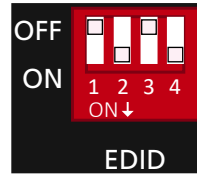


# EDID Dip Switch

The unit had an EDID dip switch for manual control of the EDID. See below for each switch position and the EDID it represents.



The default position for the EDID switch is all switches to OFF. This will detect all the connected devices and negotiate the highest common resolution possible between them.



Set switches 2 and 4 to on to set the EDID to 4K@60Hz at 4:4:4, multi-channel audio, and HDR support.



Set switches 2, 3, and 4 to ON to set the resolution to 4K@60Hz 4:4:4, multi-channel audio, with no HDR support.



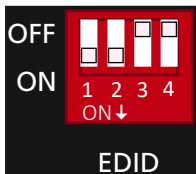
Set switches 2 and 3 to ON to set the resolution to 4K@60Hz 4:4:4, PCM multi-channel audio, with HDR support.



Set switch 1 to ON to set the resolution to 4K@60Hz 4:4:4, PCM multi-channel audio, with no HDR support.



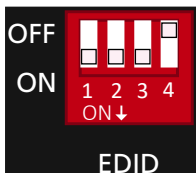
Set switches 1, 3, and 4 to ON to set the resolution to 4K@60Hz 4:4:4, 2-channel PCM audio, with no HDR support.



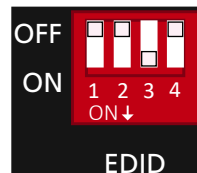
Set switches 1 and 2 to ON to set the resolution to 1080p, multi-channel audio, with no HDR support.



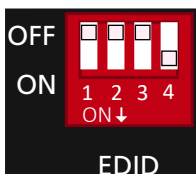
Set switches 1, 2, and 4 to ON to set the resolution to 1080p, 2-channel PCM audio, with no HDR support.



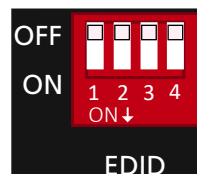
Set switches 1, 2 and 3 to ON to set the resolution to 1080p, Dolby Digital audio, with no HDR support.



Set switch 3 to ON to set the resolution to 720p, Dolby Digital audio, with no HDR support.



Set switch 4 to ON to set the resolution to 720p, 2-channel PCM audio, with no HDR support.



All switches set to OFF will also provide the ability to load a custom EDID. This will need to be done through the [Web Server](#).



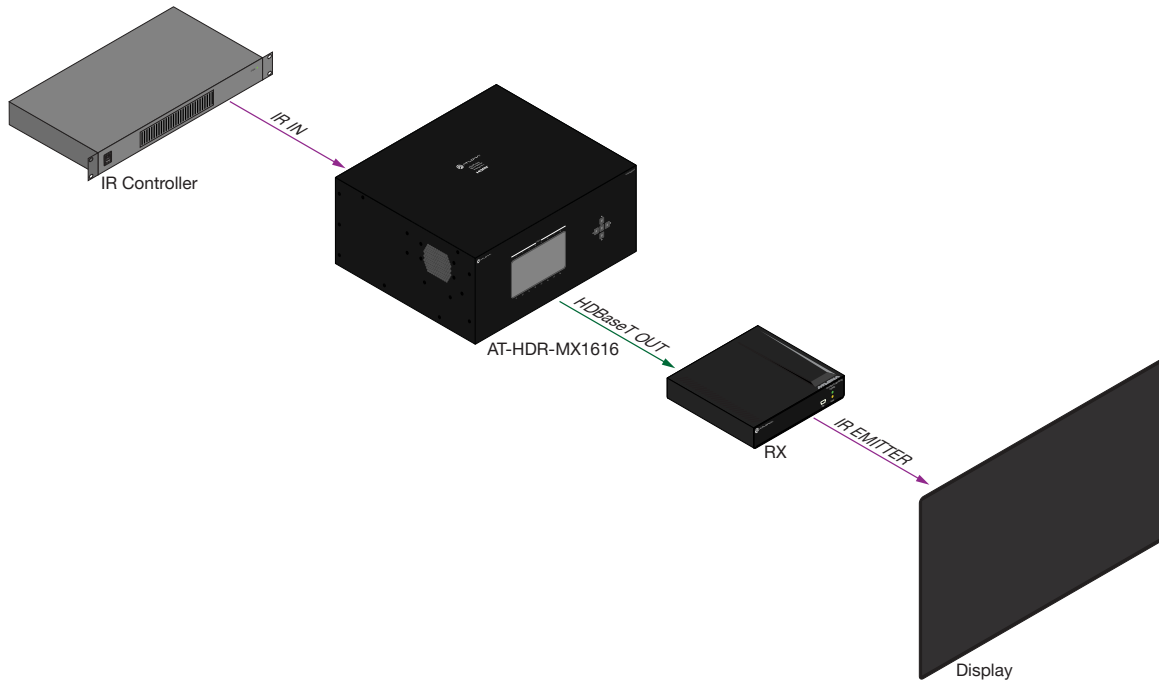
# IR

The unit can be controlled through IR. It also supports bi-directional IR pass through communication for display control through the matrix side or source control from the remote receiver side. View the IR commands on the document found at [https://atlona.com/pdf/ircodes/AT-MRC\\_IR.doc](https://atlona.com/pdf/ircodes/AT-MRC_IR.doc).

- IR IN 1 through 16 are bound with HDBaseT OUT 1 through 16.
- IR OUT 1 through 16 are bound with HDMI IN 1 through 16.

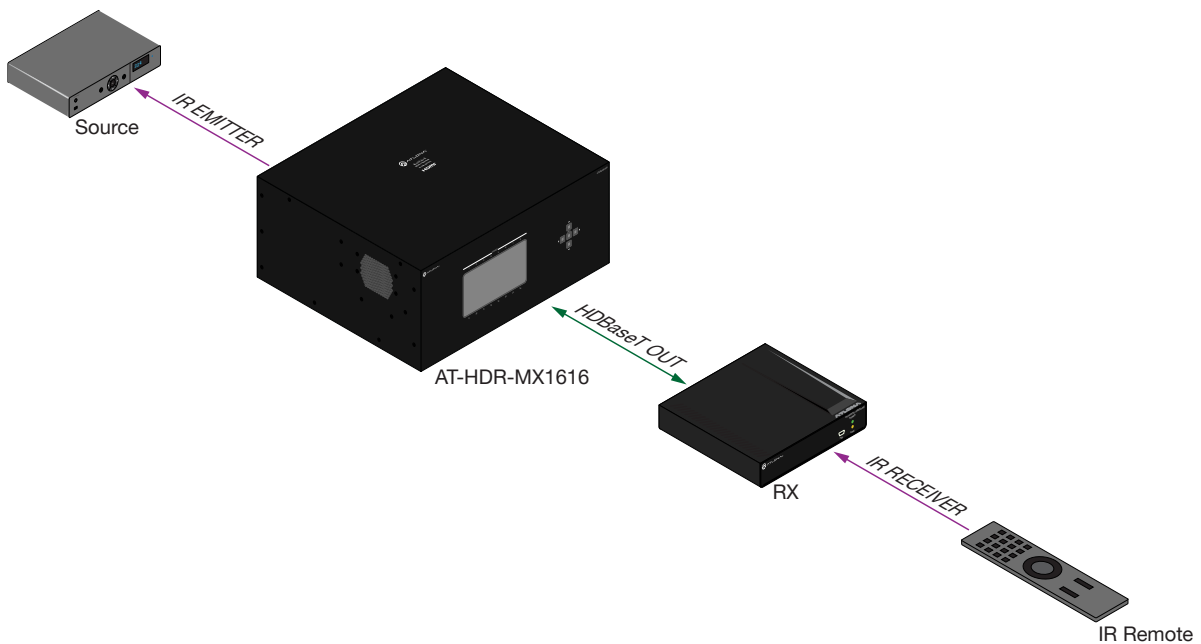
### Control Display:

IR controller → IR IN port → HDBaseT output → HDBaseT Receiver IR OUT → IR Emitter → Display



### Control Source:

Source ← IR Emitter ← HDBaseT output ← HDBaseT Receiver IR IN ← IR Receiver ← IR Remote



## Web Server

### Login

The AT-HDR-MX1616 includes a built-in Web Server, which allows easy management and control of all features. Follow the instructions below to access the Web Server.

- Find the IP address of the unit.

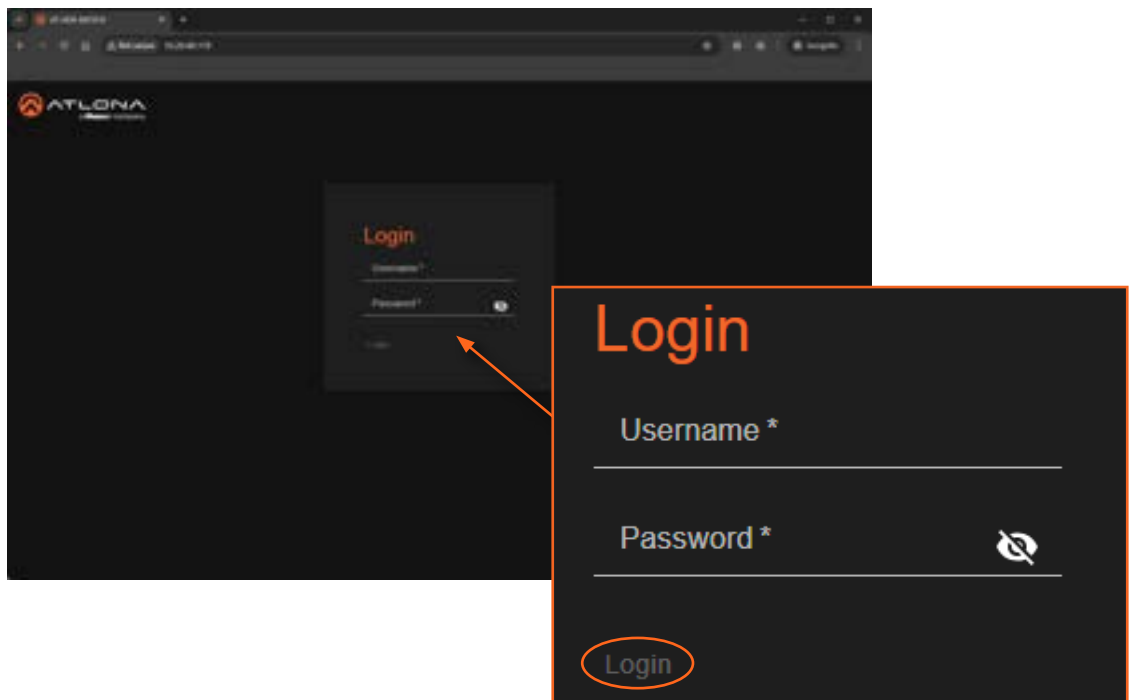
**i NOTE:** If the unit is not connected to a DHCP network, it will default to auto IP address: 169.254.X.X.

- Launch a web browser and enter the IP address of the unit.
- The AT-HDR-MX1616 **Login** page will be displayed.
- Enter the following information on the **Login** page.

Login: **admin**

Password: **Atlona**

- Click the **Login** button.



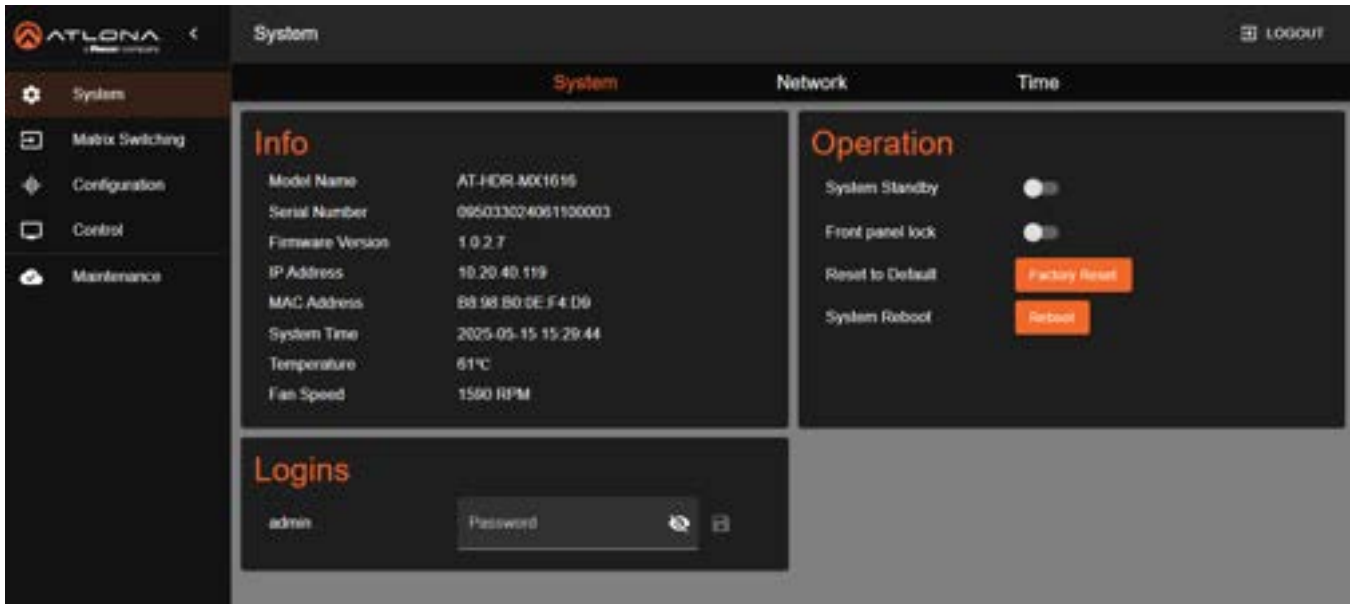
- Once logged in, it will request a password update. Enter the old password **Atlona**, enter a new password (Passwords are alphanumeric up to 13 characters), then reenter it to confirm the new password.
- Press the **APPLY** button when it highlights to update the password.
- Enter the username **admin** and the new password, then press the **Login** button.



## System

The System page will display current device information, logins, and operational selections. Network and Time information are available in the other tabs.

### System



#### Info

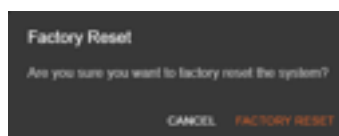
- Model Name - Displays the sku of the device.
- Serial Number - Provides the serial number of the unit.
- Firmware Version - Displays the current firmware version of the unit.
- IP Address - Displays the current IP address of the device.
- MAC Address - Displays the MAC address of the matrix.
- System Time - Displays the current date and time the unit has been set to.
- Temperature - Displays the current internal temperature of the unit.
- Fan Speed - Current fan speed is displayed here.

#### Logins

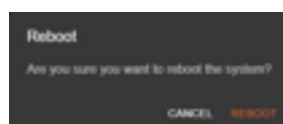
Admin - Update the current password here. Select the save button after entering the new password. A new login will be required once the password is saved.

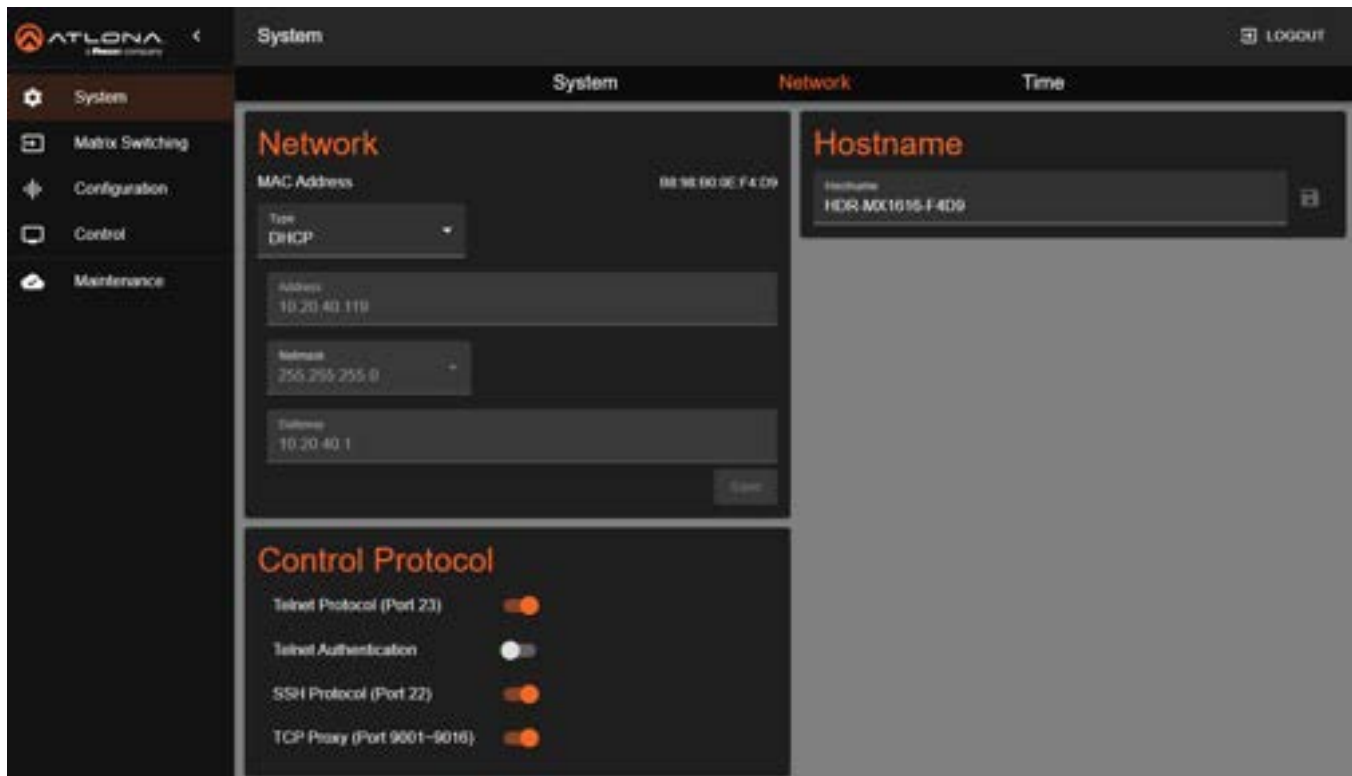
#### Operation

- System Standby - Enable (orange slider) this to put the unit into standby.
- Front Panel Lock - When selected, the front panel buttons will no longer be active.
- Reset to Default - Select the FACTORY RESET button to reset the unit to factory settings and defaults. A pop up will appear to verify the reset.



System Reboot - Press the REBOOT button to restart the unit. A pop up will appear to verify the reboot.



**Network**

**Network**

MAC Address - Displays the MAC address of the matrix.

Type - Switch between DHCP and Static IP modes.

Address, Netmask, and Gateway - Displays the current IP information of the Matrix. When set to DHCP, the options will be grayed out and uneditable. When set to Static, the IP information can be updated and saved.

**Control Protocol**

Telnet Protocol (Port 23) - Enables (orange) or Disables (gray) Telnet protocols and the use of port 23.

Telnet Authentication - Enabling this slider (when orange) will require username and password to log into Telnet.

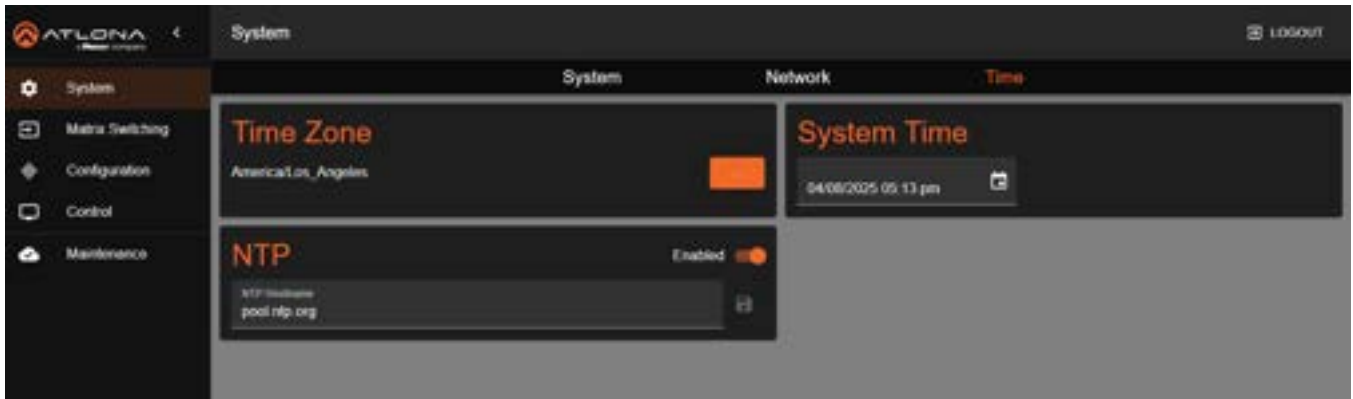
SSH Protocol (Port 22)- Enables (orange) or Disables (gray) SSH protocols and the use of port 22.

TCP Proxy (Port 9001-9016) - Enables (orange) or Disables (gray) SSH protocols and the use of ports 9001 through 9016.

**Hostname**

Hostname - Set the name that will be displayed when the unit is found on the network by an IP scan.

## Time



### Time Zone

Time Zone - Select the orange  button to select the time zone where the unit will be located from the drop down menu.

### NTP

NTP Hostname - Enable to use an NTP server for syncing the system time to a specific time server. Enter the NTP hostname or IP address for syncing, then press the save icon (disk).

### System Time

Date and Time - Select the drop down to set the date and time for the matrix. Manually enter the date and time if not synced to an NTP server.

## Matrix Switching

The Matrix Switching page will provide an easy routing option for A/V, analog audio, and setting presets.

### A/V Routing



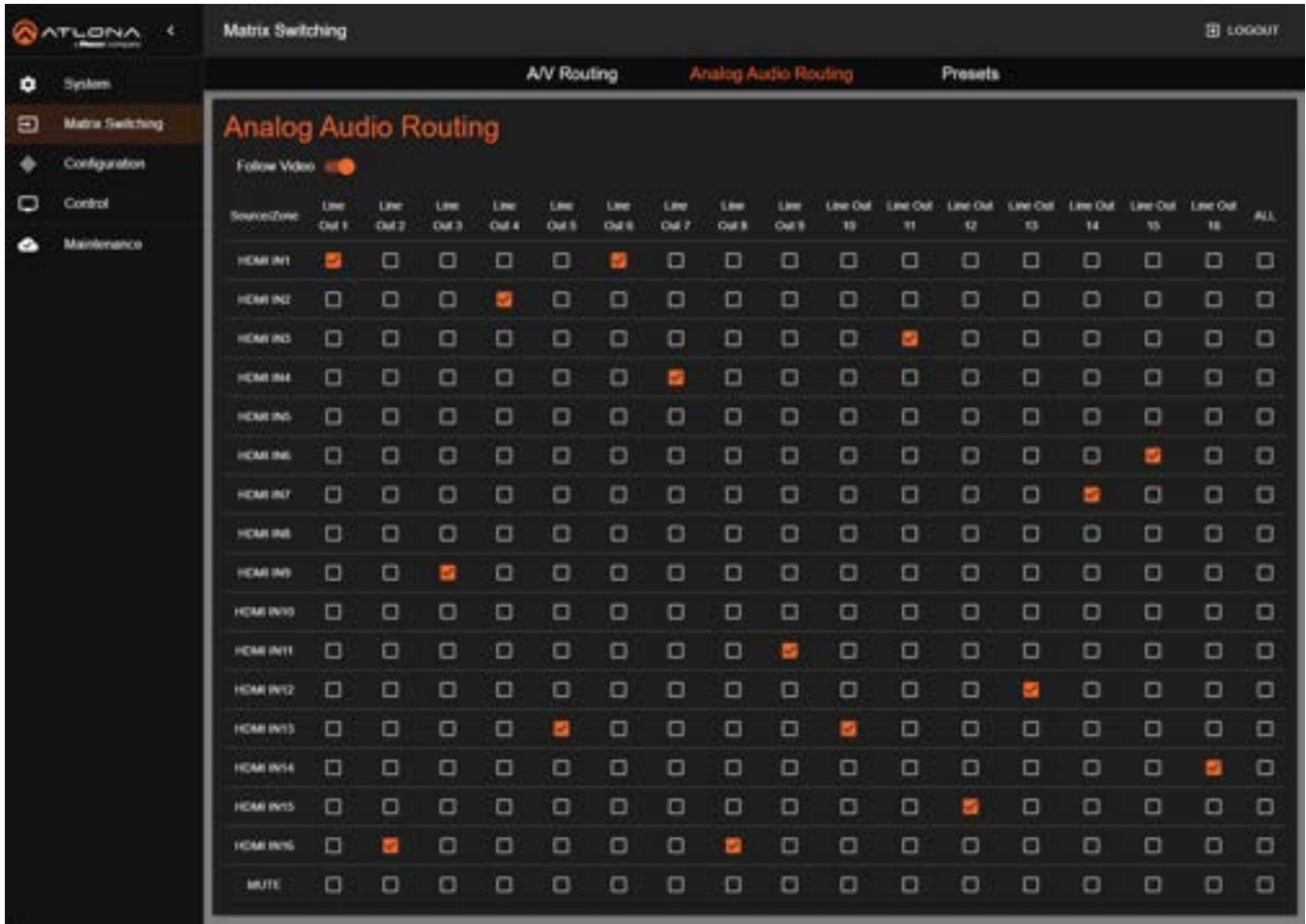
### A/V Routing

Source/Zone - Set which input will be routed to which output, by selecting the checkbox with the corresponding numbers.

Mute - Select the checkbox for the corresponding output to have audio and video muted.

All - Select the checkbox in the input row to route the input to all outputs.

Analog Audio Routing

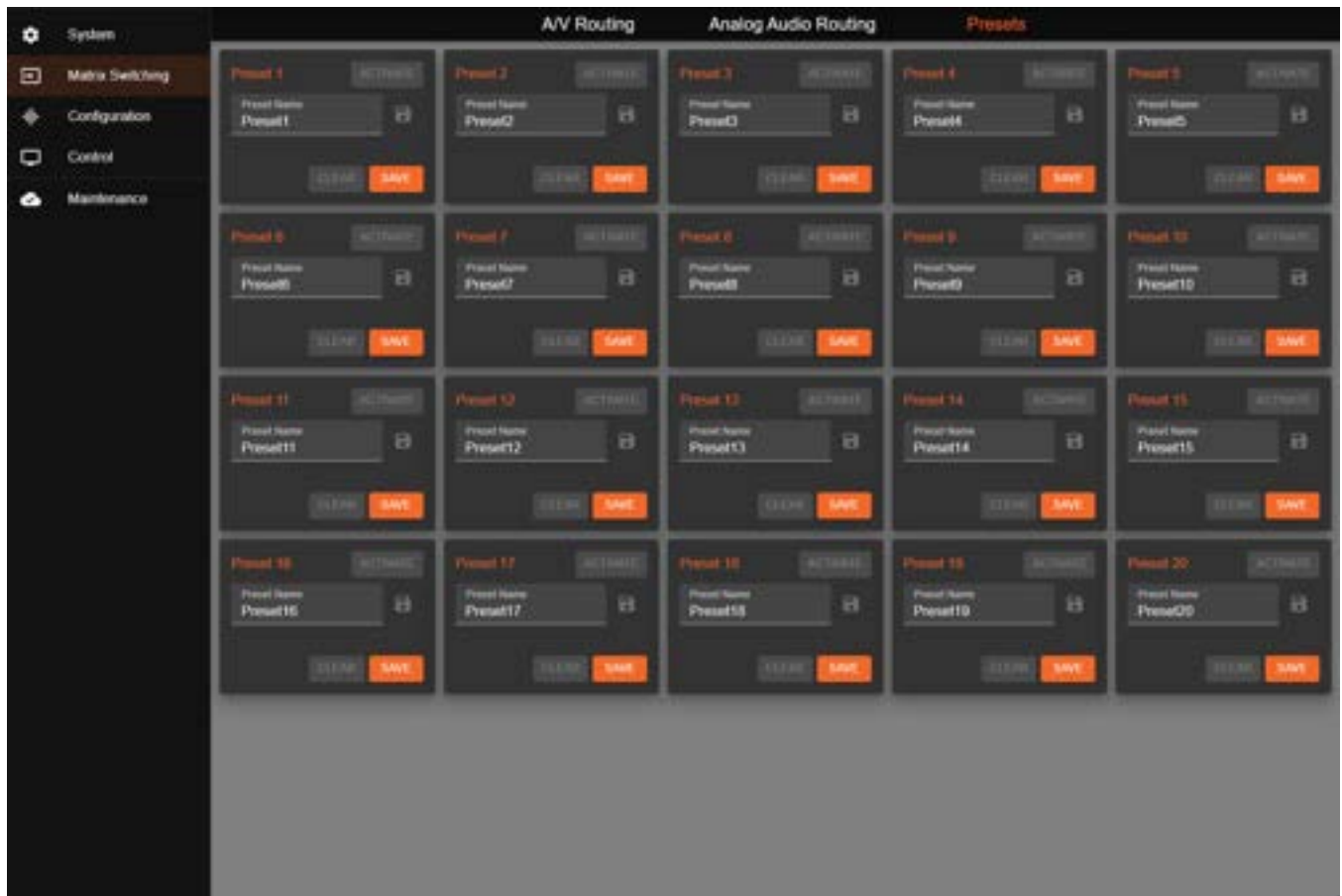


Analog Audio Routing

Follow Video - Enable to have the analog audio outputs follow the currently selected input for the corresponding HDBaseT outputs. Analog Audio Out 2 will route the audio from the input selected for HDBaseT output 2.

Mute - Select the checkbox for the corresponding analog output to be muted.

All - Select the checkbox in the input row to route the input to all analog audio outputs.

**Presets**

**Presets**

Preset Name - Set an easy-to-remember name for the A/V and Analog Audio routing.

SAVE - Select this button to save current routing settings to a quick access button.

ACTIVATE - Select the button to load the saved routing settings.

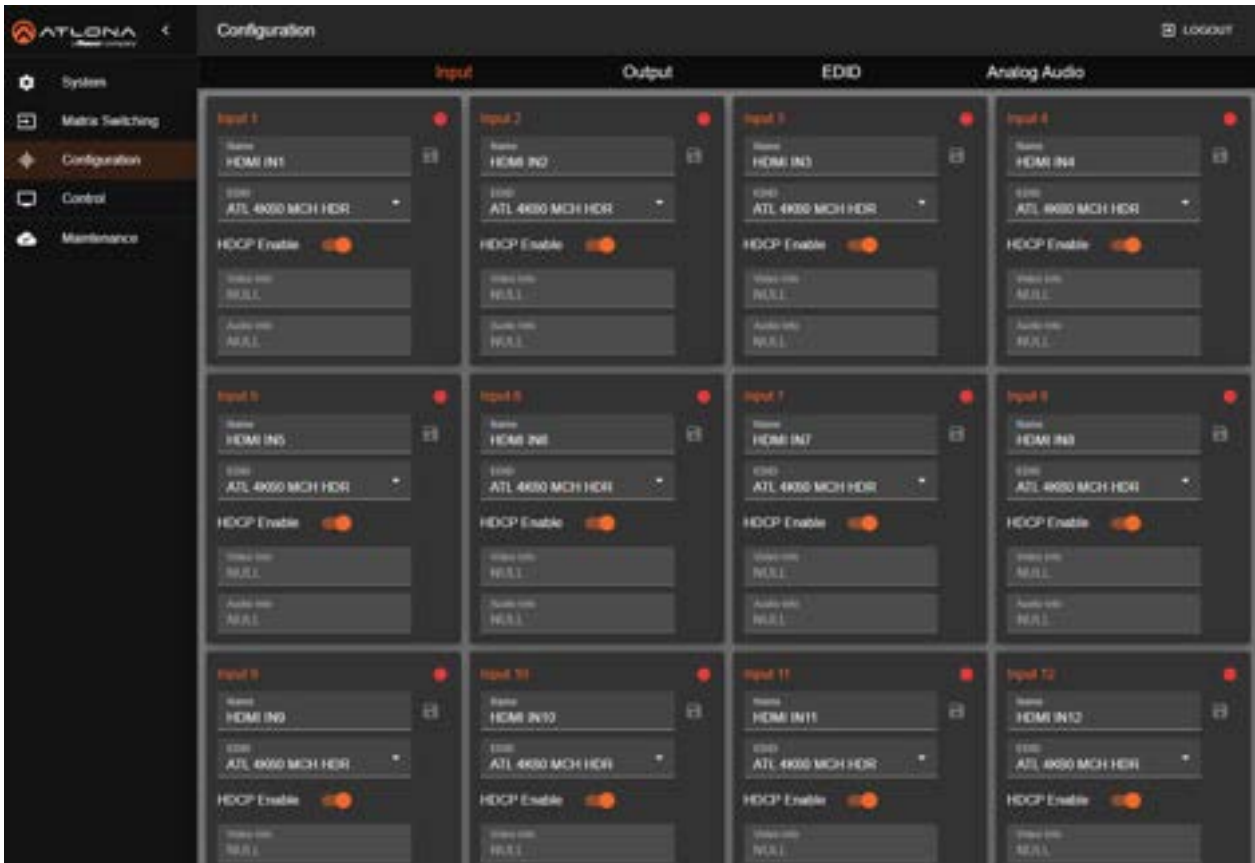
CLEAR - Select the CLEAR button to remove previously saved settings for the selected Preset.



## Configuration

The Configuration pages will provide a way to view and set: EDID, HDCP, analog audio, and I/O labels.

### Input



### Input

Name - Update the name of the currently selected Input device and press the save icon (disk).

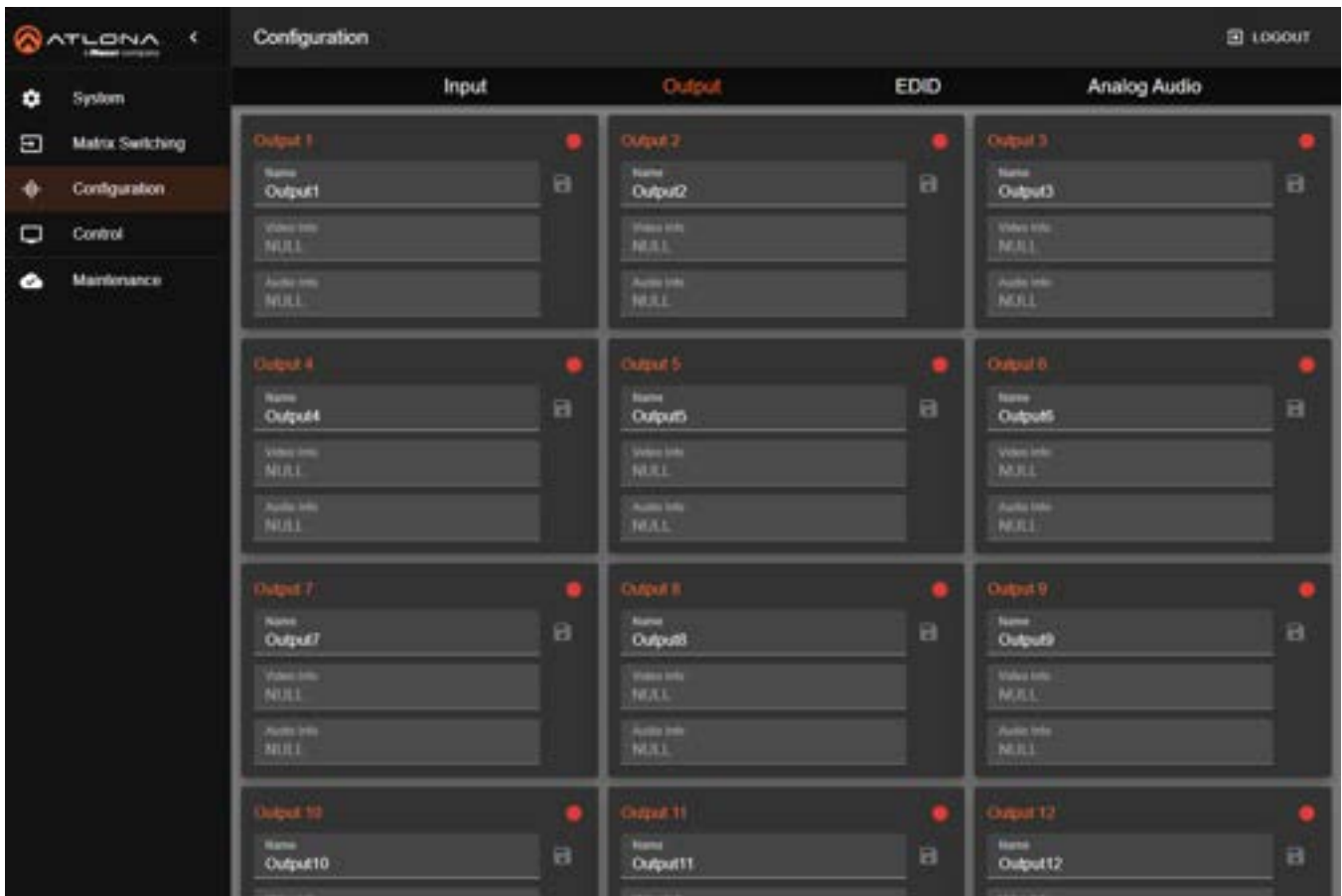
EDID - Select the preferred audio and video for the input device (see table below for selections).

HDCP Enable - Enable or disable the HDCP reporting for the selected Input.

Video and Audio Info - Displays the current EDID settings for the device.

EDID	Description
Copy 1-32	Uses the EDID that is connected to the selected output. Copy 1-16 = HDMI OUT 1 - 16, Copy 17-32 = HDBaseT OUT 1-16
ATL 4K60 MCH HDR	3840x2160@60Hz, multi-channel audio, and HDR support
ATL 4K60 MCH	3840x2160@60Hz, multi-channel audio, with no HDR support
ATL 4K60 PCM MCH HDR	3840x2160@60Hz, multi-channel PCM audio, and HDR support
ATL 4K60 PCM MCH	3840x2160@60Hz, multi-channel LPCM audio, with no HDR support
ATL 4K60 2CH	3840x2160@60Hz, 2-channel audio, with no HDR support
ATL 1080P MCH	1920x1080, multi-channel audio, with no HDR support
ATL 1080P 2CH	1920 x 1080, 2-channel audio, with no HDR support
ATL 1080P DD	1920 x 1080, Dolby Digital®, with no HDR support
ATL 1080P DVI	1920 x 1080, DVI, with no HDR support
ATL 720P DD	1280 x 720, Dolby Digital®, with no HDR support
ATL 720P 2CH	1280 x 720, 2-channel audio, with no HDR support
Custom 1 - 10	Selects a custom EDID

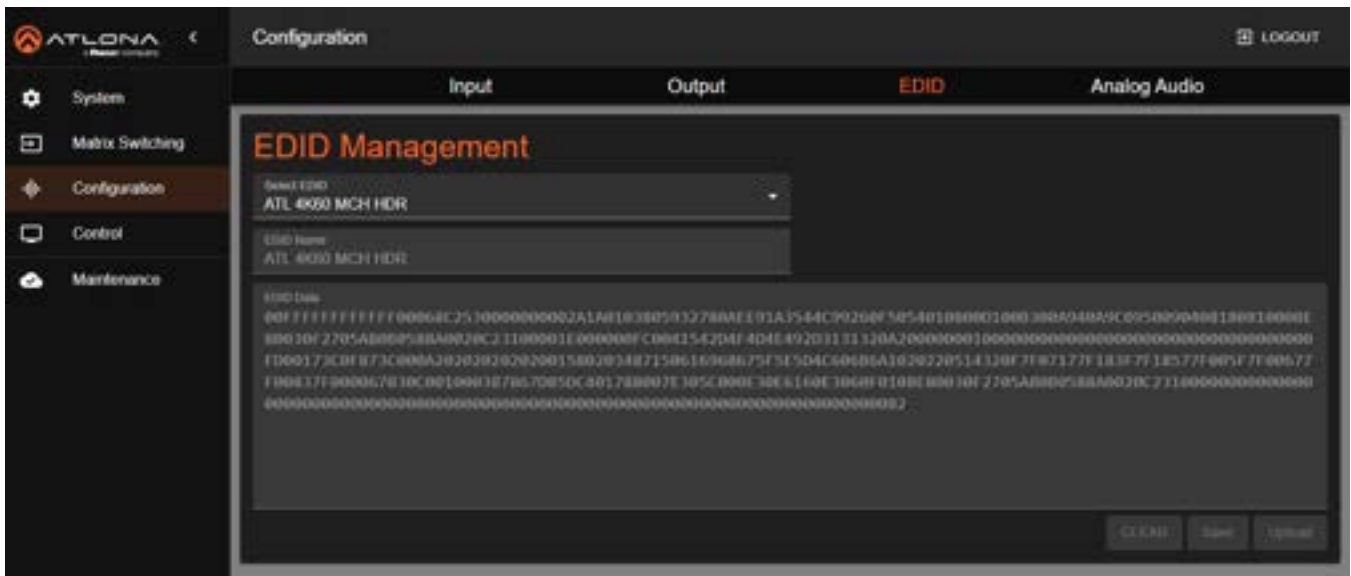
Output



Output

Name - Update the name of the currently selected output and press the Save button.

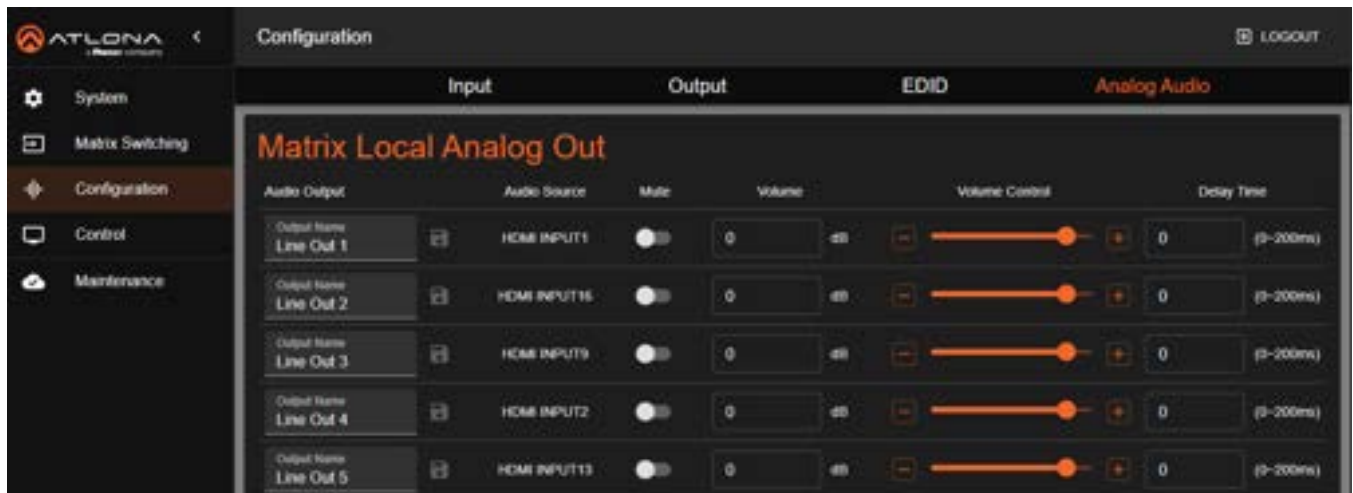
Video and Audio Info - Displays the current audio and video format for the HDBaseT Output.

**EDID**

**EDID Management**

Select EDID - Select from the EDID drop down menu to view or change EDID name and data.

Name - Will display the current EDID name, this can be changed for custom EDIDs.

Data - Will display the EDID information from the presets or copied output EDIDs. Custom EDIDs can have raw data entered into this field to create a new EDID. The EDID must be the raw data with no spaces or delimiters.

**Analog Audio**

**Matrix Local Analog Out**

Output Name - Set the name of the analog audio line out and press the save icon (disk).

Audio Source - Displays the currently routed audio source.

Mute - Select to mute the current audio on the analog audio output.

Volume - Set the current dB level of the analog audio out. dB levels should be set between -79 and 15.

Volume Control - Move the slider to set the volume level manually.

Delay Time - Set the amount of milliseconds it takes before the audio level is changed.


**EQ**

Audio Output - Select the analog audio output to be adjusted.

Enable EQ - Set the EQ to Active, to adjust the levels manually. Select Bypass to send analog audio unmodified to the analog audio output.

EQ Adjustment - Use the slider to adjust the EQ levels manually. It will adjust from -10dB up to 10dB.

## Control

The Control page will allow for RS-232 and CEC settings to be set.

### RS-232



#### Remote RS-232

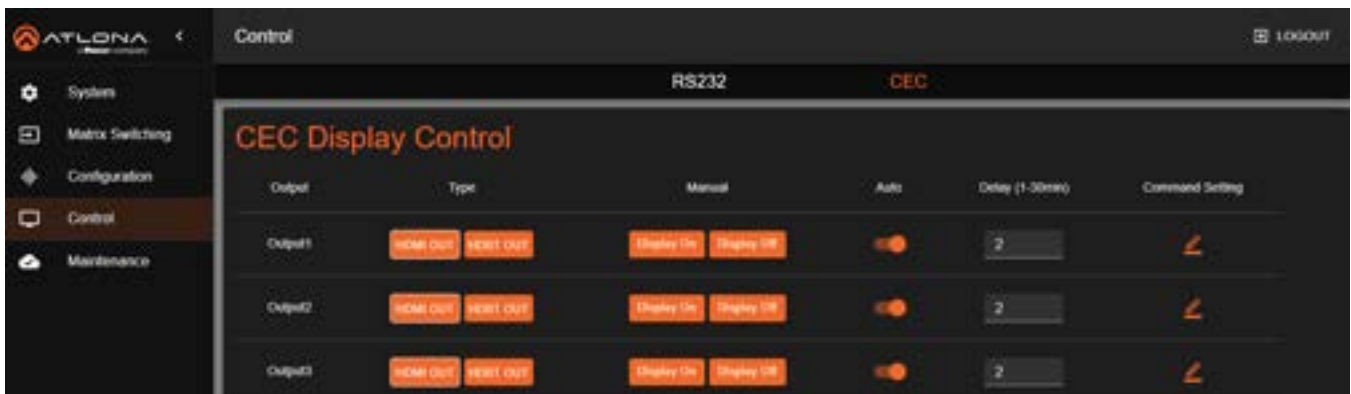
**Destination** - Select the HDBaseT output where the RS-232 settings and commands will be sent.

**Baud Rate, Parity Bits** - Set the Baud and Parity of the output command. Data and Stop bit cannot be adjusted for the output.

**Command** - Type in the command for the controlled device (found within the device's manual). Type in hexadecimal commands when the HEX checkbox is selected.

**Send** - Select this button to send the entered command to the selected output.

### CEC



#### CEC Display Control

**HDMI/HDBT OUT** - Select the corresponding button to configure and test the specified output.

**Display On/Display Off** - Select the command to be sent to the selected output.

**Auto** - When enabled, this will send the display on/off command when source signal is received or lost.

**Delay** - Set how long the unit will wait in minutes before the command will be sent to the display after signal trigger.

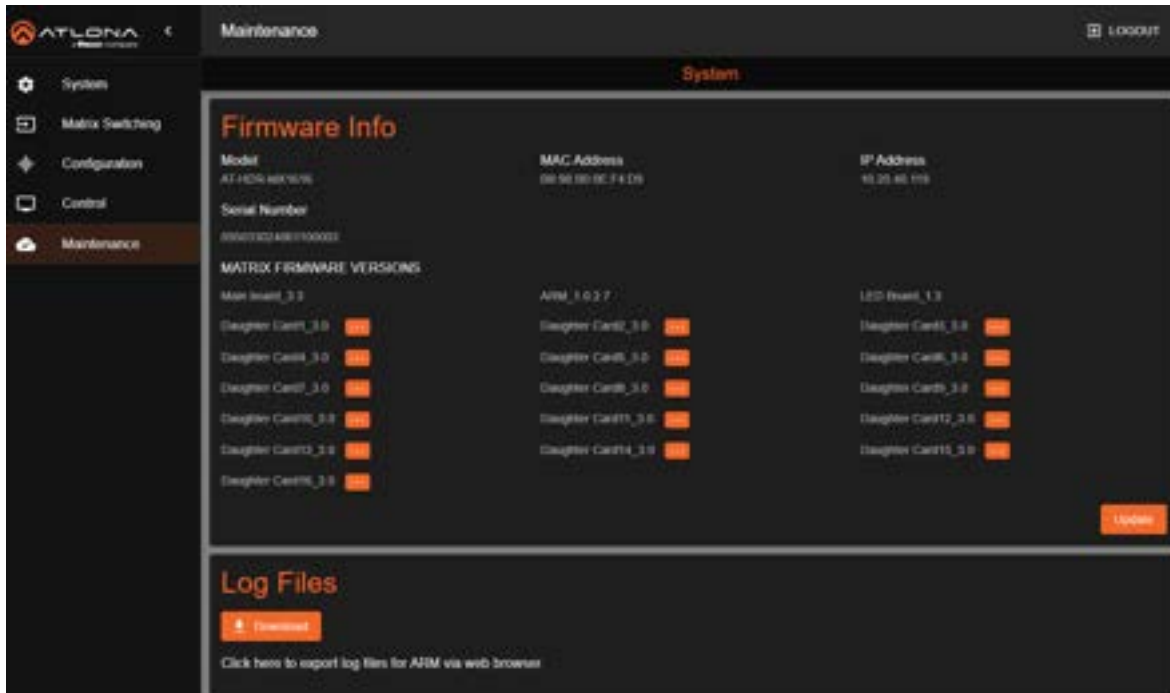
**Command Setting** - Displays the current CEC command that is being sent. This can be adjusted based on device commands (found within the controlled device's manual).



## Maintenance

The Maintenance page displays the current firmware information for the matrix and its HDBaseT chips. From this page, the user can update firmware and download the log file.

### System



### Firmware Info

Model, MAC Address, IP Address, and Serial Number - Displays the current information for the Matrix.

Matrix Firmware Versions - Displays the current version for the Matrix. Hover the mouse over the ... buttons to display the output MCU and HDBaseT chip firmware versions.

Update - Select this button to find the firmware files on the local computer to upload to the matrix. The firmware can be found within the Firmware tab of the product page: <https://atlon.com/product/at-hdr-mx1616>.

### Log Files

Download - Select the download button to save the ARM log files to the local PC.

# Appendix

## Specifications

Video		
Signal Type	Input - HDMI Output - HDBaseT, HDMI	
Copy Protection	HDCP 1.4/2.2	
Pixel Clock	Up to 600MHz with a compatible receiver	
UHD/HD/SD	4096×2160(DCI)@60/50/30/25/24Hz 3840×2160(UHD)@60/50/30/25/24Hz 2560×1440@30Hz 1920×1080p@60/59.94/50/30/29.97/25/24/23.98Hz	1920×1080i@30/29.97/25Hz 1280×720p@60/59.94/50/30Hz 720×576i/p@50Hz 720×480i/p@60Hz
VESA All resolutions are 60Hz	2560×1600 2048×1536 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0	
Color Depth	8-bit, 10-bit, 12-bit	
HDR	Up to 4K HDR10@60Hz, 4K Hybrid-Log Gamma (HLG)@60Hz, and 4K Dolby Vision®@60Hz	

Audio			
HDMI Pass-Through Formats	LPCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Dolby Digital Plus™ Dolby Atmos®	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®
Bit Depth	Up to 24 bits		
Sample Rate	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz		
<b>Analog Audio</b>			
Format	Stereo 2-Channel		
Type	Unbalanced Audio		

LAN	
Port	1 x RJ45
Standards and Protocols	HTTP, HTTPS, Telnet, SSH, mDNS
Speeds	10/100 Mbps
Addressing	DHCP, Static

CEC	
Ports	16 x HDMI OUT, Type A, 19-pin female 16 x HDBaseT pass through, RJ45
Triggering	via Auto, and built-in Web Server

Connectors	
HDMI IN	16 x Type A, 19-pin female
HDMI OUT	16 x Type A, 19-pin female
HDBaseT OUT	16 x RJ45
Analog Audio Out	16 x 3-pin captive screw
IR IN/OUT/Ext	33 x 3.5 mm, female
ETHERNET/LAN	2 x RJ45
RS-232	1 x DE-9
AC 100-240V 50/60Hz	1 x IEC connector

Indicators, Buttons, and Controls	
Buttons Up, Down, Left, Right, Enter	5 - momentary, tact-type

Resolution/Distance	Distance	Resolution
HDMI	10m/30ft	1080p@60Hz 4:4:4 8-bit
	5m/15ft	4K@60Hz 4:4:4 12-bit
CAT 5e/6	100m/330ft	1080p@60Hz 4:4:4 10-bit
	70m/230ft	1080p@60Hz 4:4:4 12-bit 4K@60Hz 4:4:4 8-bit
CAT 6a/7	100m/330ft	1080p@60Hz 4:4:4 12-bit 4K@60Hz 4:4:4 8-bit

Power	
Consumption	Idle: 126W Max: 360W
Supply	Internal AC 100-240V 50/60Hz
BTU/h (max)	791.12

Temperature	Fahrenheit	Celsius
Operating	32 to 113	0 to 45
Storage	-4 to 158	-20 to 70
Humidity (RH)	10% to 90%, non-condensing	

Dimensions (H x W x D)	Inches	Millimeters
Unit	6.93 x 17.32 x 15.07	176 x 440 x 382.7

Weight	Pounds	Kilograms
Device	38.58	17.49

Certification	
Device	CE, FCC

Compliance	
NDAA-899	Yes

Warranty	
Device	To view the product warranty, use the following link: <a href="https://atlon.com/warranty">https://atlon.com/warranty</a>



