

# OMEGA™

## 4K HDR 3x2 Matrix Switcher

for HDMI and USB-C with HDMI Outputs



## Version Information

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| Version | Release Date | Notes                                       |
|---------|--------------|---------------------------------------------|
| 1       | Dec 2018     | Release                                     |
| 2       | Sep 2019     | Updated for FW 1.1.0 WebGUI changes         |
| 3       | Sep 2019     | Added Configuration and Setup Guide section |

## Welcome to Atlona!

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

Registration only takes a few minutes and protects this product against theft or loss. In addition, you will receive notifications of product updates and firmware. Atlona product registration is voluntary and failure to register will not affect the product warranty.

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

## Sales, Marketing, and Customer Support

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## Operating Notes

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**IMPORTANT:** Visit <http://www.atlona.com/product/AT-OME-SW32> for the latest firmware updates and User Manual.

# Atlona, Inc. (“Atlona”) Limited Product Warranty

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## 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:

- 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

- 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

- 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 products is the purchaser's exclusive remedy and Atlona 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 products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

## Coverage Periods

Atlona 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.
- NOTE: Data cable (USB-C) and Wifi antenna covered by 1 year warranty.

### 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](http://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](http://www.atlona.com).

## Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packaging or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.

## Atlona, Inc. (“Atlona”) Limited Product Warranty

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- 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.

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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.

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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](http://www.atlona.com).

## 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.

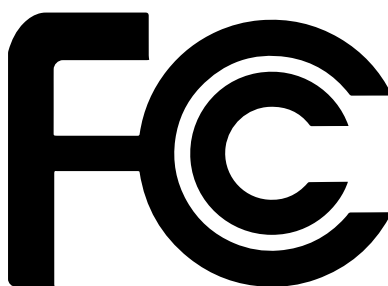
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place 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 Statement



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-OME-SW32 is a 3x2 matrix switcher with HDMI and USB-C inputs, and HDMI outputs. It is HDCP 2.2 compliant and supports 4K HDR and 4K/60 4:4:4 at HDMI data rates up to 18 Gbps. The USB-C input is ideal for AV interfacing with newer Mac®, Chromebook™, and Windows® PCs, as well as smartphones and tablets. Additionally, 4K downscaling to 1080p is available on HDMI output 1 when connected to an HD sink. Depending on the intended application, the OME-SW32 can be set to specific switching modes that include mirrored outputs (default), one of the outputs fixed to an input, or unrestricted matrix switching.

For additional integration convenience, the OME-SW32 features automatic input selection, automatic display control, balanced audio de-embedding (linked to HDMI output 1), control via TCP/IP and RS-232, and remote management with AMS (Atlona Management System). This versatile, compact matrix switcher is ideal for under-table mounting in meeting spaces, to serve applications with side-by-side displays, videoconferencing, interfacing with OmniStream networked AV systems, secondary switching into a larger AV system, and more.

## Features

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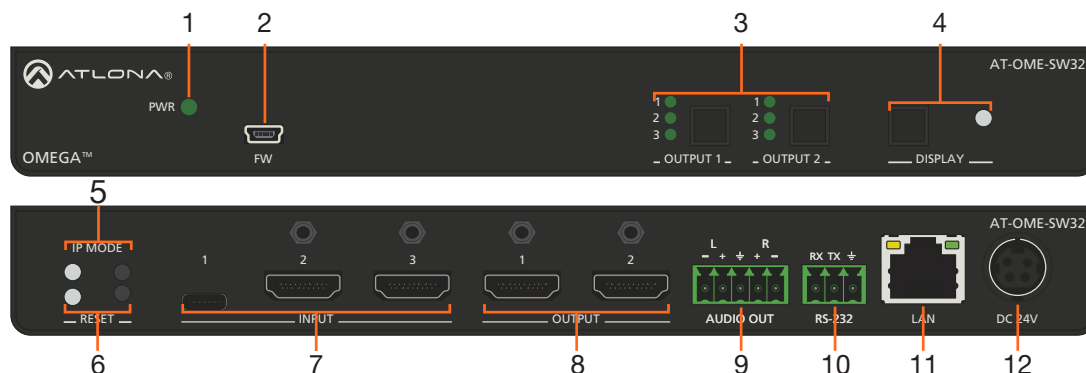
- Three selectable switching modes
- Supports resolutions up to 4K/UHD 60Hz @ chroma sub-sampling 4:4:4, 4K HDR, Dolby Vision, and HLG
- HDCP 2.2 compliant
- EDID learning for multiple display EDIDs
- Built in internal EDIDs provide 12 unique EDIDs to ensure compatibility
- Multiple control options such as RS-232, TCP/IP, webGUI, and front panel
- Multi-channel audio pass through up to Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, and Dolby Atmos
- 2Ch audio de-embedding using the analog audio port

## Package Contents

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1 x AT-OME-SW32  
1 x Captive screw connector, 5-pin  
1 x Captive screw connector, 3-pin  
1 x USB-C cable  
4 x Mounting screws  
1 x Pair rack mount ears  
1 x 24V DC power supply  
1 x IEC power cord  
1 x Installation Guide

## Panel Description



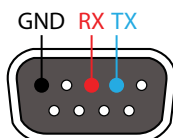
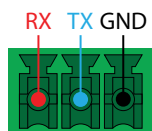
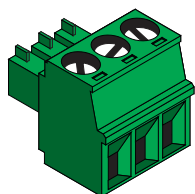
- 1 PWR LED**  
Illuminates green when receiving power.
- 2 FW port**  
Connect a mini USB cable from this port to a PC to firmware update the unit.
- 3 OUTPUT 1 & OUTPUT 2**  
Use the button to switch between sources, the LEDs will illuminate to show the selected source.  
**NOTE:** Output two button and LED will only be functional in Matrix Mode.
- 4 DISPLAY button and LED**  
Press the display button to trigger an on/off command for the display. The LED will blink while the command is being sent. By default, the display button will mute the video output of the HDMI ports.
- 5 IP MODE button and LED**  
Press and hold the button for 5 seconds until the LED blinks to switch the IP mode between DHCP and Static IP modes. The LED will blink 2 times for DHCP and 3 times for static IP.
- 6 RESET button and LED**  
Press and hold the button for 5 seconds until the unit resets. The LED will blink as the unit resets to factory default settings.
- 7 INPUT**  
Connect the USB-C or HDMI sources to these ports.
- 8 OUTPUT**  
Connect HDMI cables from these ports to HDMI displays.
- 9 AUDIO OUT**  
Connect to an audio DSP, amplifier, or other audio distribution devices.
- 10 RS-232**  
Use for device or display control.
- 11 LAN**  
Connect an Ethernet cable from this port to a Local Area Network (LAN).
- 12 DC 24V**  
Connect the included DC 24V power supply to this port.

# Installation

## Captive Screw Connections

### RS-232

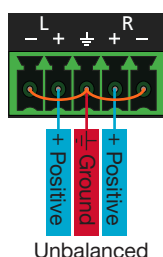
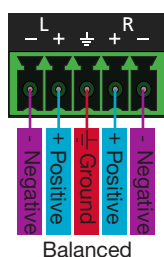
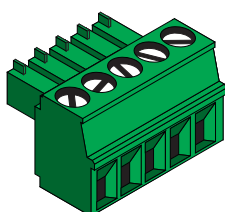
Connect to a control system for unit switching or to a display for power and audio display control.



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

### Audio

De-embeds audio from HDMI Output 1 to send to an audio DSP, amplifier, or other audio distribution devices.



Use a jumper between the negative and ground pins when using an unbalanced connection.

## Mounting Instructions

The AT-OME-SW32 includes two mounting brackets and four mounting screws, which can be used to attach the units to any flat surface.

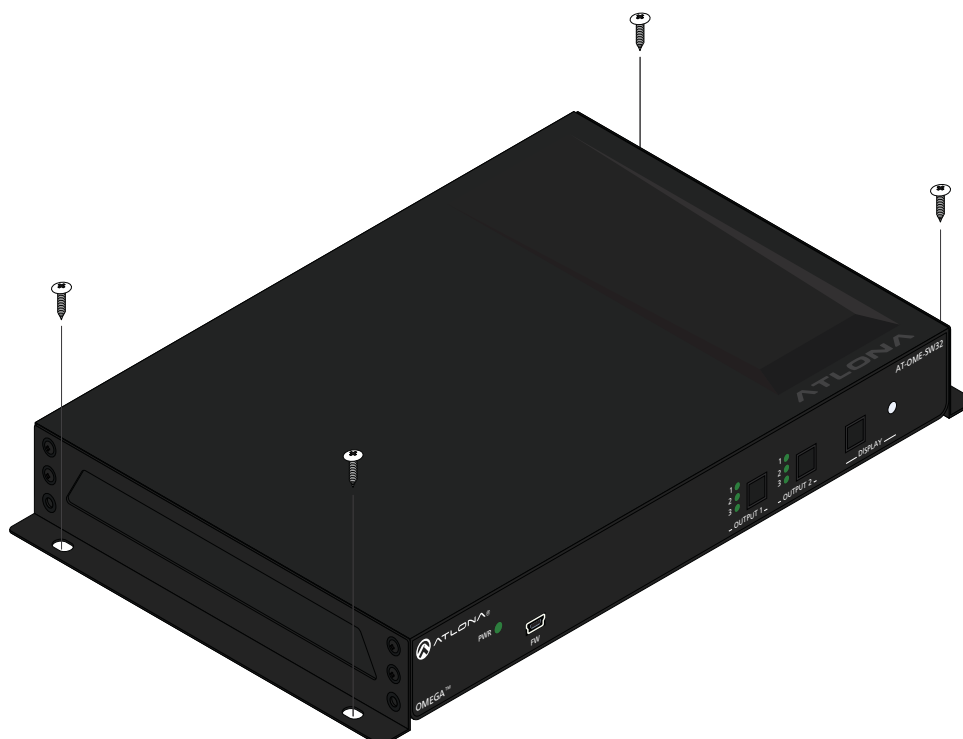
1. Remove the top 2 case screws on the side of the unit.
2. Align the mounting brackets to the side of the units.
3. Use the previously removed case screws to secure the mounting bracket to the enclosure.
4. Repeat the steps for the other side of the unit.



5. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.



**NOTE:** Mounting brackets can also be inverted to mount the unit under a table or other flat surface.



## Connection Instructions

1. Connect HDMI and USB-C Sources to the inputs.
2. Connect up to two HDMI displays to the outputs.
3. Connect the 2CH analog AUDIO OUT ports to a DSP, or audio amplifier (e.g. AT-GAIN-60).
4. \*Optional\* For control, connect to the 3-pin captive screw RS-232 port.
5. \*Optional\* Connect a network switch to the LAN port, for IP control, system configuration, or Ethernet routing.
6. Connect the included DC 24V power supply to the power port.
7. Connect the included IEC power cord from the power supply to a compatible power outlet.

## IP Modes

### DHCP

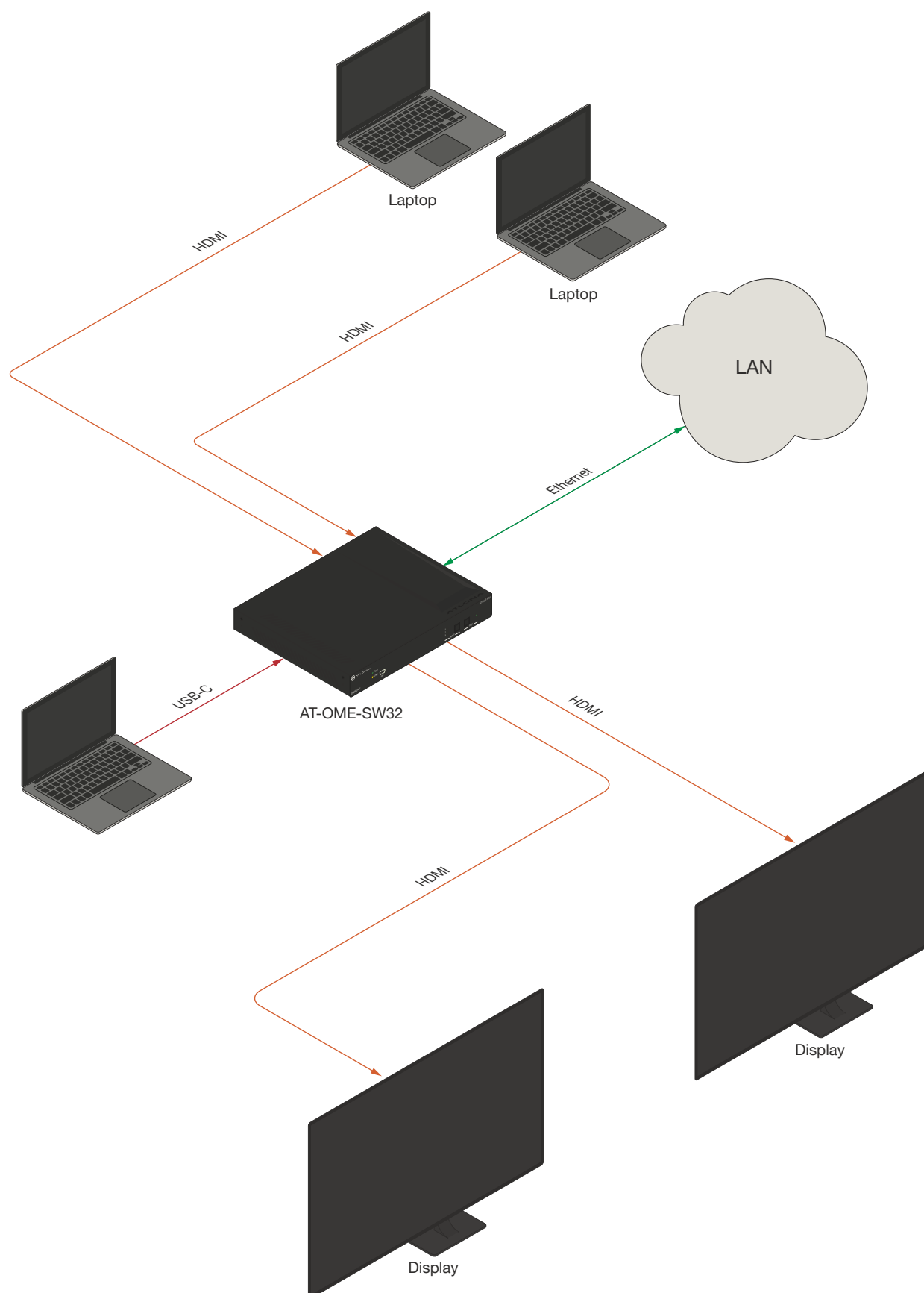
By default, the AT-OME-SW32 is set to DHCP mode. In this mode, when the AT-OME-SW32 is connected to the Local Area Network (LAN), it will automatically be assigned an IP address by the DHCP server (if available).

### Static

If no DHCP server is available, or a static IP is required, the SW32 can be set to static IP mode using the IP MODE button or webGUI.

- Press and hold the **IP MODE** button for 5 seconds to switch to static IP MODE, the LED will blink 3 times when it goes into Static IP mode. In this mode, the AT-OME-SW32 will be set to the following:  
IP address: 192.168.1.254  
Subnet mask: 255.255.0.0  
Gateway: 192.168.1.1
- To switch back to DHCP, press and hold the IP MODE button for 5 seconds. The LED will blink 2 times when successfully put into DHCP mode.

## Connection Diagram

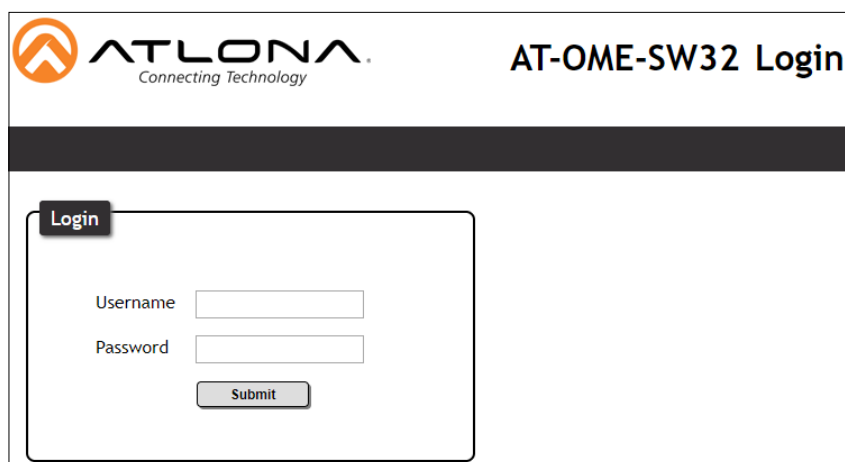


## WebGUI

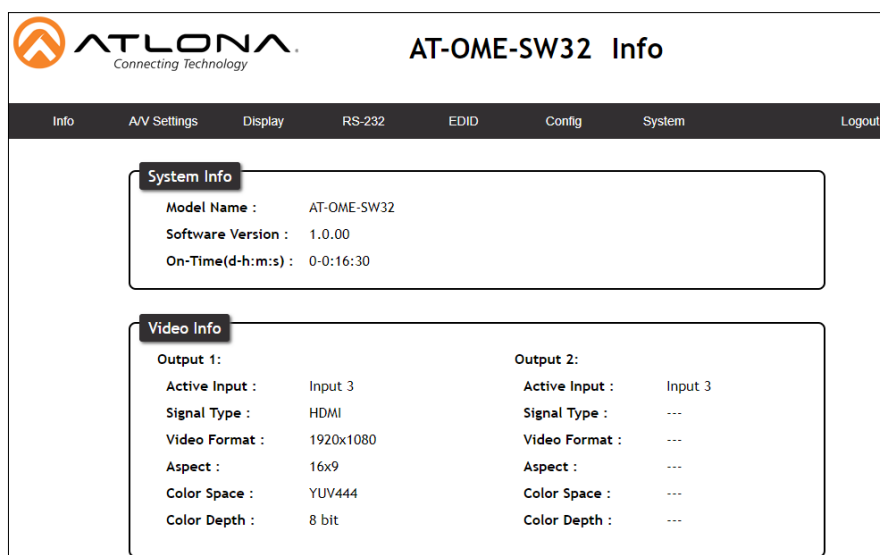
The AT-OME-SW32 includes a built-in webGUI, which allows easy remote management and control of all features. Follow the instructions below to access the webGUI.

1. Make sure that an Ethernet cable is connected between the **LAN** port on the AT-OME-SW32 and the network.
2. Use an IP scanner to determine the IP address of the unit.
3. Launch a web browser and enter the IP address in the address bar.
4. The AT-OME-SW32 **Login** page will be displayed.
5. Enter the following information on the **Login** page.

Login: admin  
 Password: Atlona

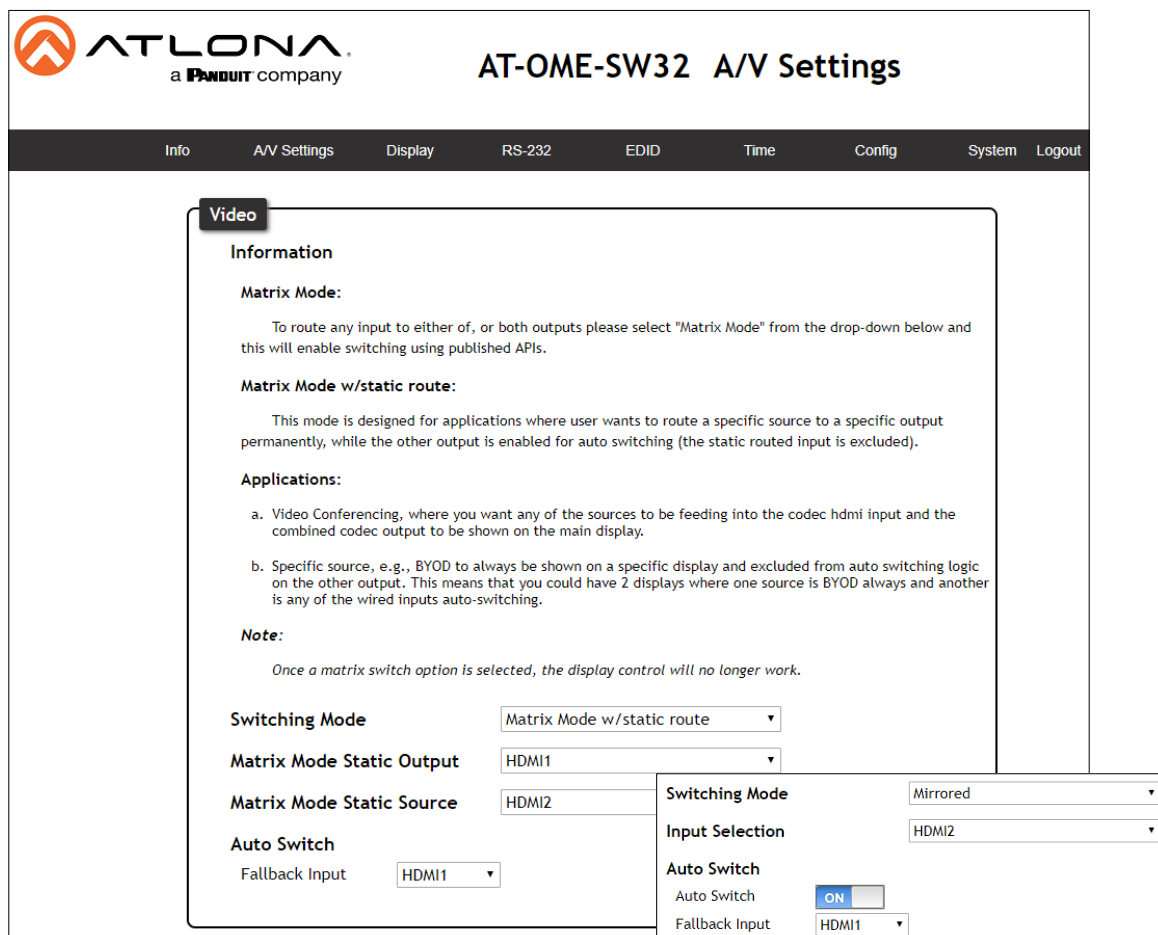


6. Click the Login button. The info page will display, giving all the general information of the AT-OME-SW32.



## Audio/Video Settings

Select A/V Settings from the top navigation to adjust routing and video settings.



**ATLONA**  
a **PANOUT** company

### AT-OME-SW32 A/V Settings

Info A/V Settings Display RS-232 EDID Time Config System Logout

**Video**

**Information**

**Matrix Mode:**

To route any input to either of, or both outputs please select "Matrix Mode" from the drop-down below and this will enable switching using published APIs.

**Matrix Mode w/static route:**

This mode is designed for applications where user wants to route a specific source to a specific output permanently, while the other output is enabled for auto switching (the static routed input is excluded).

**Applications:**

- Video Conferencing, where you want any of the sources to be feeding into the codec hdmi input and the combined codec output to be shown on the main display.
- Specific source, e.g., BYOD to always be shown on a specific display and excluded from auto switching logic on the other output. This means that you could have 2 displays where one source is BYOD always and another is any of the wired inputs auto-switching.

**Note:**

Once a matrix switch option is selected, the display control will no longer work.

**Switching Mode** Matrix Mode w/static route

**Matrix Mode Static Output** HDMI1

**Matrix Mode Static Source** HDMI2

**Auto Switch**

Fallback Input HDMI1

**Switching Mode** Mirrored

**Input Selection** HDMI2

**Auto Switch**

Auto Switch ☒ ON

Fallback Input HDMI1

### Switching Mode

**Mirrored** - When selected from the drop down menu, both HDMI outputs will pass source signal from the same selected source. This mode is selected by default.

**Matrix Mode** - When selected, each HDMI Output will route source signals independently.

**Matrix Mode w/static route** - Selecting this will enable the second output to auto route input signals while the first output will stay fixed to the chosen input.



**NOTE:** When Matrix Mode is selected, display control becomes inoperable and the Display tab will be inaccessible in the webGUI.

### Matrix Mode Static Output (Matrix Mode w/static route)

HDMI 1 or HDMI 2 - Choose which port will be set to the static source. This output will not auto switch.

### Matrix Mode Static Source (Matrix Mode w/static route)

USB-C, HDMI 1 or HDMI 2 - Select which source will be routed to the static output.

### Input Selection (Mirrored Mode)

**Mirrored** - Manually select the input that will be routed to the outputs.

### Auto Switch

**Auto Switch (mirrored mode)** - Enable (ON) or disable (OFF) auto switch mode, this will switch inputs whenever a new source signal is activated or when the current input signal is lost or turned off.

**Fallback Input** - Select which input the unit will fall back to when the current signal is lost or turned off.

**Audio**

**HDMI1 Output**  
☐ OFF

**HDMI2 Output**  
☐ OFF

**Analog Output**  
☐ OFF

**HDCP**

**HDCP Settings**

USBC ☐ OFF

HDMI1 ☐ OFF

HDMI2 ☐ OFF

## Audio

On - Unmutes the audio output signal, allowing audio to pass through the output.

Off - Mutes the audio output signal of the selected port. No audio will pass when selected.



**NOTE:** Analog audio output is de-embedded from HDMI output port 1.

**NOTE:** Audio must be 2 channel to de-embed and is not downmixed from multichannel.

## HDCP Settings

On - Sets the HDCP of the unit to auto, allowing HDCP to switch between compliant and non-compliant according to the source and display HDCP status.

Off - Sets the unit to HDCP non-compliant. No HDCP compliant source signals will pass in this mode.



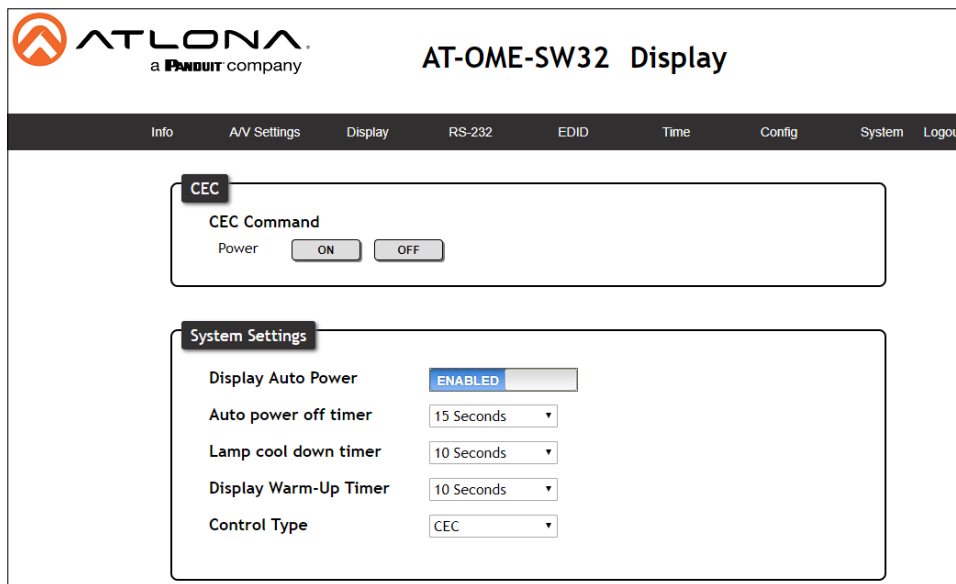
**NOTE:** Some sources flag all content as protected, by selecting HDCP off the source device may send only user created content. In some cases, the source must be configured to send content to non-HDCP devices (e.g. HDCP must be turned off within a PS4's settings to pass unprotected content).

## Display

Select Display from the top navigation to adjust display control settings.



**NOTE:** The Display page is only available when in mirrored or matrix switching w/static mode.



### CEC

Command: Power - Press to send the CEC power on or off command out through the HDMI ports.

### System Settings

Display Auto Power - Sets the unit to send the display power on/off command to the output.

Auto Power Off Timer - Sets the unit to send the display power off command to the output when signal is no longer received for the set auto power off time.

Lamp cool down timer - Sets the time between when the display is turned off and when the next command can be sent.

Display Warm-Up Timer - Sets the amount of time between when the display is turned on to when the unit sends any commands.

Control Type - Selects which command type is used to send commands and what type of control signal is sent when the display button is pressed. Options are CEC, TCP/IP or RS-232.

TCP/IP Settings of Controlled Device

|                                                                                              |                                                                                          |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>IP Mode</b> <span style="border: 1px solid #ccc; padding: 2px;">Non-Login</span>          | <b>IP Mode</b> <span style="border: 1px solid #ccc; padding: 2px;">Non-Login</span>      |
| <b>IP Address</b> <span style="border: 1px solid #ccc; padding: 2px;">192.168.1.1</span>     | <b>IP Address</b> <span style="border: 1px solid #ccc; padding: 2px;">192.168.1.2</span> |
| <b>Port</b> <span style="border: 1px solid #ccc; padding: 2px;">23</span>                    | <b>Port</b> <span style="border: 1px solid #ccc; padding: 2px;">23</span>                |
| <b>Username</b> <span style="border: 1px solid #ccc; padding: 2px;">admin</span>             | <b>Username</b> <span style="border: 1px solid #ccc; padding: 2px;">admin</span>         |
| <b>Password</b> <span style="border: 1px solid #ccc; padding: 2px;">.....</span>             | <b>Password</b> <span style="border: 1px solid #ccc; padding: 2px;">.....</span>         |
| <span style="border: 1px solid #ccc; padding: 5px 15px; background-color: #eee;">Save</span> |                                                                                          |

### TCP/IP Settings of Controlled Device (only available when IP is selected)

**IP Mode** - Toggle telnet login mode between Non-Login and Login. If set to Login, a username and password will be required to control the controlled device via TCP/IP.

**IP Address** - Sets to the IP of the controlled device/display.

**Telnet Port** - Set the telnet port of the controlled device for control. Default is 23.

**Username & Password** - Sets the username and password that is required when login mode is enabled.



**NOTE:** Currently only the first column is used. The second column will be for a future feature update.

RS232/IP commands

|                                                                                                                                                                                                                |                                                                     |                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Manufacturer</b>                                                                                                                                                                                            | <span style="border: 1px solid #ccc; padding: 2px;">Generic</span>  |                                                                 |
| <b>Products</b>                                                                                                                                                                                                | <span style="border: 1px solid #ccc; padding: 2px;">Generic</span>  |                                                                 |
| <b>Model</b>                                                                                                                                                                                                   | <span style="border: 1px solid #ccc; padding: 2px;">Generic</span>  |                                                                 |
| Display Commands<br><small>[Please use \x as a delimiter for HEX values]</small>                                                                                                                               |                                                                     |                                                                 |
| <b>Repeat Command</b><br>Status <span style="border: 1px solid #ccc; padding: 2px;">DISABLED</span>                                                                                                            |                                                                     |                                                                 |
|                                                                                                                                                                                                                | Times <span style="border: 1px solid #ccc; padding: 2px;">2</span>  |                                                                 |
| <b>ON</b>                                                                                                                                                                                                      | <span style="border: 1px solid #ccc; padding: 2px;">PW 1</span>     | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>OFF</b>                                                                                                                                                                                                     | <span style="border: 1px solid #ccc; padding: 2px;">PW 0</span>     | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>Volume+</b>                                                                                                                                                                                                 | <span style="border: 1px solid #ccc; padding: 2px;">VOL+</span>     | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>Volume-</b>                                                                                                                                                                                                 | <span style="border: 1px solid #ccc; padding: 2px;">VOL-</span>     | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>Mute</b>                                                                                                                                                                                                    | <span style="border: 1px solid #ccc; padding: 2px;">MUTE</span>     | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>Mute On</b>                                                                                                                                                                                                 | <span style="border: 1px solid #ccc; padding: 2px;">MUTE ON</span>  | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <b>Mute Off</b>                                                                                                                                                                                                | <span style="border: 1px solid #ccc; padding: 2px;">MUTE OFF</span> | <span style="border: 1px solid #ccc; padding: 2px;">Send</span> |
| <span style="border: 1px solid #ccc; padding: 5px 15px; background-color: #eee;">Save</span> <span style="border: 1px solid #ccc; padding: 5px 15px; background-color: #eee; margin-left: 10px;">Revert</span> |                                                                     |                                                                 |

RS232/IP commands

|                                                                                             |                                                                          |  |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|
| <b>Manufacturer</b>                                                                         | <span style="border: 1px solid #ccc; padding: 2px;">Generic</span>       |  |
| <b>Products</b>                                                                             | <span style="border: 1px solid #ccc; padding: 2px;">Generic</span>       |  |
| <b>Model</b>                                                                                | <span style="border: 1px solid #ccc; padding: 2px;">Acer</span>          |  |
| Repeat Command<br>Status <span style="border: 1px solid #ccc; padding: 2px;">Hitachi</span> |                                                                          |  |
|                                                                                             | Times <span style="border: 1px solid #ccc; padding: 2px;">Infocus</span> |  |
| <b>ON</b>                                                                                   | <span style="border: 1px solid #ccc; padding: 2px;">Lg</span>            |  |
| <b>OFF</b>                                                                                  | <span style="border: 1px solid #ccc; padding: 2px;">Nec</span>           |  |
| <b>Volume+</b>                                                                              | <span style="border: 1px solid #ccc; padding: 2px;">Optoma</span>        |  |
| <b>Volume-</b>                                                                              | <span style="border: 1px solid #ccc; padding: 2px;">Panasonic</span>     |  |
| <b>Mute</b>                                                                                 | <span style="border: 1px solid #ccc; padding: 2px;">Pjlink</span>        |  |
| <b>Mute On</b>                                                                              | <span style="border: 1px solid #ccc; padding: 2px;">Planar</span>        |  |
| <b>Mute Off</b>                                                                             | <span style="border: 1px solid #ccc; padding: 2px;">Qomo</span>          |  |

RS232/IP commands

|                                                                                                  |                                                                                      |  |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| <b>Manufacturer</b>                                                                              | <span style="border: 1px solid #ccc; padding: 2px;">Panasonic</span>                 |  |
| <b>Products</b>                                                                                  | <span style="border: 1px solid #ccc; padding: 2px;">Panasonic Projector</span>       |  |
| <b>Model</b>                                                                                     | <span style="border: 1px solid #ccc; padding: 2px;">Panasonic Projector</span>       |  |
| Repeat Command<br>Status <span style="border: 1px solid #ccc; padding: 2px;">Panasonic TV</span> |                                                                                      |  |
|                                                                                                  | Times <span style="border: 1px solid #ccc; padding: 2px;">Panasonic TV (Copy)</span> |  |

### RS-232 / IP Commands

**Manufacturer, Products, Models** - Select the make and model of the display for control. Commands have been programmed into the unit for a wide range of products. If the current display is not found within the database, use generic and manually adjust the command fields.

**Repeat Command** - Enable Status to repeat the commands. Default repeat number is 2 and can be adjusted from 2 to 4 times.

**Commands: On/Off/Volume/Mute** - These fields will automatically be filled with the correct command when selecting a manufacturer and product from the drop down menus. If manually entering the commands, type them into the fields next to the command name.

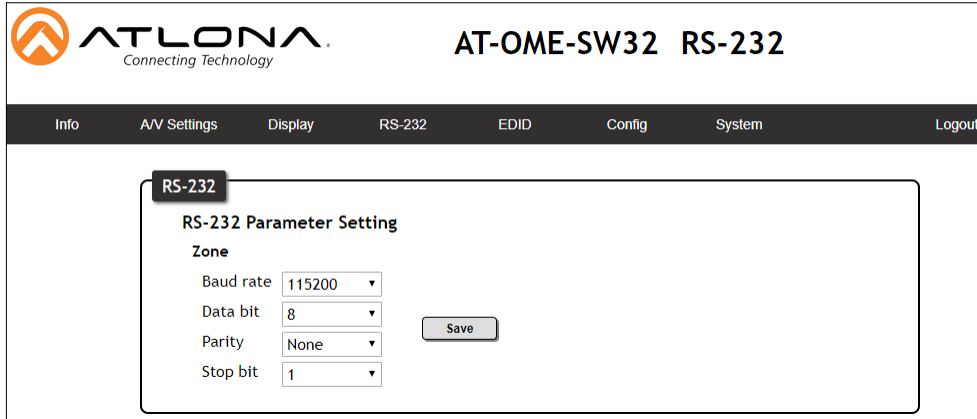
**Send** - Use this button to send the command to the display, this can be used while manually typing the commands to ensure the commands are correct.

**Save** - Save the commands to the webGUI. Manufacturer, products, and Model will revert to Generic but the commands will be saved from the previously selected and saved Manufacturer, products, and model selection.

**Revert** - Sets the commands back to the previously saved settings.

## RS-232

Select RS-232 from the top navigation to adjust the zone control parameters for the RS-232 port.

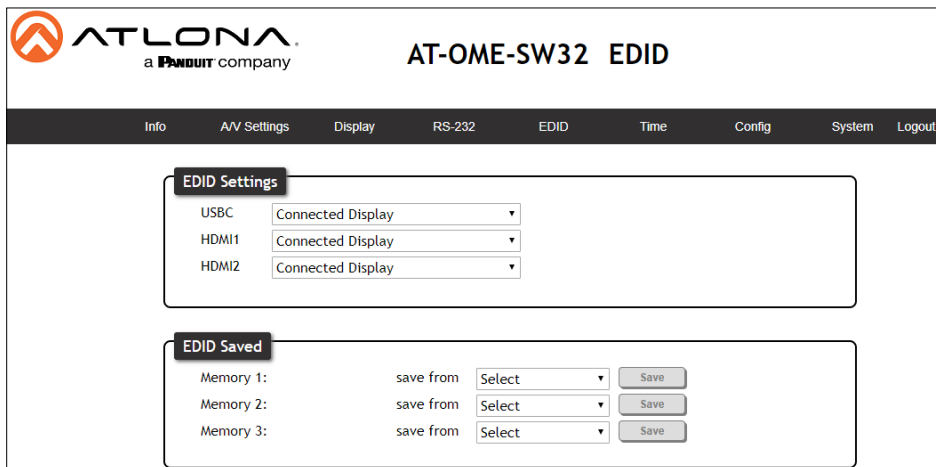


### RS-232 Parameter Setting

Zone - Select the baud rate, data bit, parity, and stop bit to match the display's parameters. Defaults are 115200, 8, None, and 1.

## EDID

Select EDID from the top navigation to save/load EDIDs.



### EDID

EDID Settings - Use the drop down menu to select between EDID choices.

| EDID Selections   |                                                                  |              |              |
|-------------------|------------------------------------------------------------------|--------------|--------------|
| Connected Display | Chooses the highest common resolution between source and display |              |              |
| Internal          | 3840x2160 2CH w/ HDR                                             | 1600x900 2CH | 1280x800 2CH |
|                   | 1920x1200 2CH                                                    | 1440x900 2CH | 1280x720 2CH |
|                   | 1920x1080 2CH                                                    | 1366x768 2CH | 1024x768 2CH |
| Saved             | 3 Memory slots                                                   |              |              |

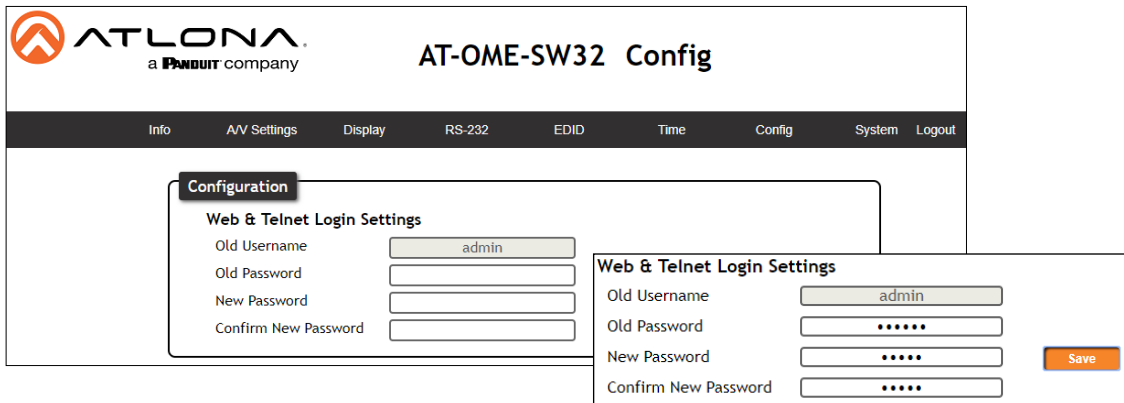
EDID Saved - The ID field will display the memory # and currently saved EDID name, select the output from the drop down menu to be saved. Once the output is selected, press the save button to make it available in the EDID settings drop down menus.



**NOTE:** Output 1 provides automatic 4K to 1080p scaling unless another EDID is selected.

## Config

Select Config from the top navigation to update the admin password.



The screenshot shows the ATLONA AT-OME-SW32 Config web interface. The top navigation bar includes links for Info, A/V Settings, Display, RS-232, EDID, Time, Config, System, and Logout. The main content area is titled "Configuration" and contains a "Web & Telnet Login Settings" form. The form has four input fields: Old Username (pre-filled with "admin"), Old Password, New Password, and Confirm New Password. A "Save" button is located at the bottom right of the form.

## Users

Admin Password - Update the admin password for the switcher. Only the admin password may be changed, the username will remain admin.

**NOTE:** The passwords cannot contain any special characters. e.g. !@#\$%^&\*?+-;,'".

Once the new password has been entered, press the Save button to make the password live. The user will be logged out and must log back in with the new password.

## System

Select System from the top navigation to adjust network and system options.



The screenshot shows the AT-OME-SW32 System webGUI interface. The top navigation bar includes links for Info, AV Settings, Display, RS-232, EDIO, Time, Config, System, and Logout. The main content area is divided into two sections: Network and System.

**Network Section:**

- Network:**
  - MAC Address: B8-9B-80-00-01-96
  - IP Mode: ☐ DHCP ☐ Static
  - IP:
  - Netmask:
  - Gateway:
  - Telnet Port:
  - Save**
- Telnet Login Mode:**
  - ☐ OFF ☐ ON
  - Telnet Timeout:
  - Hostname:
  - Save**
- 802.1x Security:**
  - Authentication:
  - Save** **Revert** **Test**

**System Section:**

- Front Panel Lock:**
- Reset to Default:**
- Firmware Update:**
  - No file chosen
  - Update**
- Velocity Update:**
  - No file chosen
  - Upload**

### Network

MAC Address - Displays the MAC address of the unit.

IP Mode - Switch between static and DHCP IP modes.

IP, Netmask, Gateway - This will display the unit's current DHCP IP settings. When set to static, fill in the IP address, netmask, and gateway.

Telnet Port - Set the telnet port if needed for control. Default port is 23.

Telnet Login Mode - Toggle telnet login mode on and off. If on, a username and password will be required to control the unit via telnet.

Telnet Timeout - Set the amount of time between actions before the current user is logged out. Default is 10000 seconds.

Hostname - Set the name for the matrix, this will show up in network discovery.

802.1x Security - Select between Disable, Protected EAP (PEAP), TLS, and Tunneled TLS security options.

### System

Front Panel Lock - Lock or unlock the front panel buttons.

Reset to Default- Press the Factory Default button to set the unit back to all factory settings, including IP mode.

Firmware update - Use the choose file button to search the local PC for the firmware file. Once selected, press the update button to start the firmware update.



**NOTE:** Firmware updates and release notes can be found at <https://atlona.com/product/AT-OME-SW32/>.

## Appendix

### Configuration and Setup Guide

This section will provide a step by step guide for basic set up and configuration for A/V routing and control.

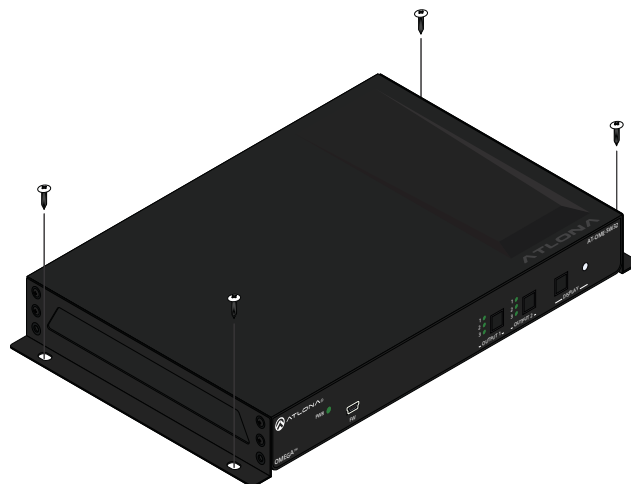
#### Installation

The AT-OME-SW32 includes two mounting brackets and four mounting screws, which can be used to attach the units to any flat surface.

1. Remove the top 2 case screws on the side of the unit.
2. Align the mounting brackets to the side of the units.
3. Use the previously removed case screws to secure the mounting bracket to the enclosure.
4. Repeat the steps for the other side of the unit.
5. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.

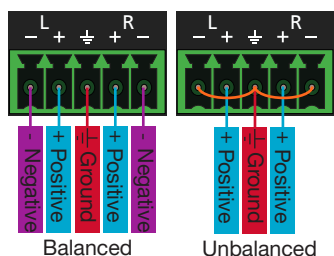
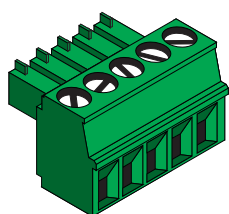


**NOTE:** Mounting brackets can also be inverted to mount the unit under a table or other flat surface.



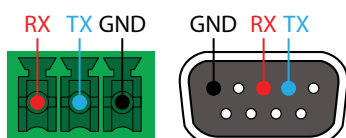
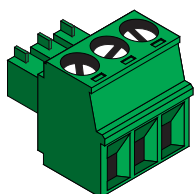
#### Connection

1. Connect the sources to the input ports.
2. Connect up to two HDMI displays to the outputs.
3. \*Optional\* Connect the 2CH analog AUDIO OUT ports to a DSP, or audio amplifier (e.g. AT-GAIN-60).



Use a jumper between the negative and ground pins when using an unbalanced connection.

4. \*Optional\* For RS-232 control, connect to the 3-pin captive screw RS-232 port.



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

5. Connect a network switch to the LAN port, for IP control, system configuration, or Ethernet routing.
6. Connect the included DC 24V power supply to the power port.
7. Connect the included IEC power cord from the power supply to a compatible power outlet.

## Configuration

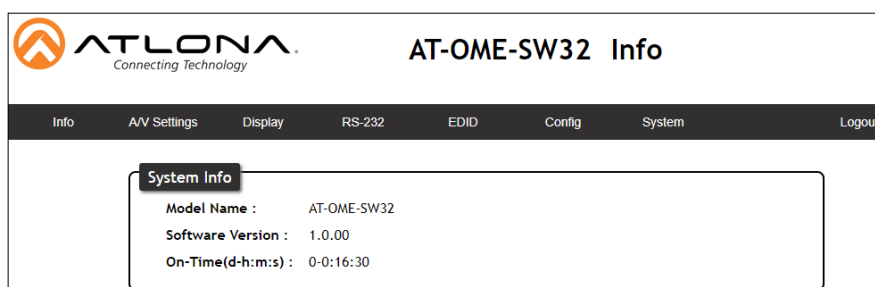
Configuration will be done through the webGUI.

By default the unit will be set to DHCP mode and receive an IP address from the network switch. If the server doesn't allow DHCP connections, press and hold the IP MODE button for 5 seconds. The LED will blink 3 times when set to static. The PC connecting to the unit will need to be set to the same IP range as the unit.

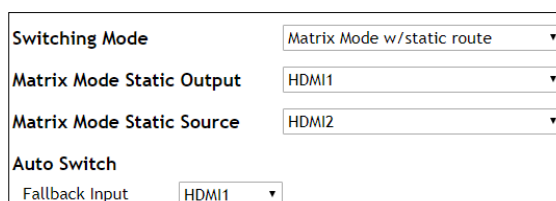
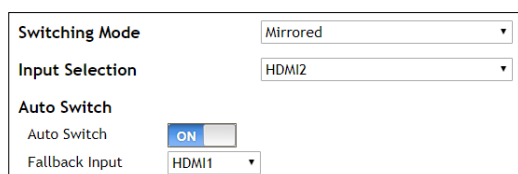
IP address: 192.168.1.254  
 Subnet mask: 255.255.0.0  
 Gateway: 192.168.1.1

1. Launch a web browser and enter the IP address in the address bar.
2. The AT-OME-SW32 **Login** page will be displayed.
3. Enter the following information on the **Login** page.

Login: admin  
 Password: Atlona



4. By default, the SW32 will be in Mirrored Mode, with Auto switching enabled. Change this on the A/V Settings page to the needed mode.
  - a. Select **A/V Settings** from the top menu.
  - b. Select the switching mode from the drop down menu. Mirrored Mode and Matrix Mode w/Static Route are the only modes with auto switching available. Auto switching will only work on the non-static output.



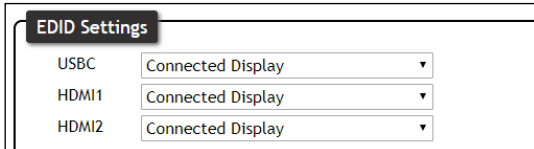
5. By default, the SW32 will have HDCP on auto. Change this within the A/V Settings page if needed.
  - a. Select **A/V Settings** from the top menu.
  - b. Select the slider next to the port to switch between auto (ON) and non-compliant (OFF) HDCP.



**NOTE:** Some sources flag all content as protected, by selecting HDCP off the source device may send only user created content. In some cases, the source must be configured to send content to non-HDCP devices (e.g. HDCP must be turned off within a PS4's settings to pass unprotected content).

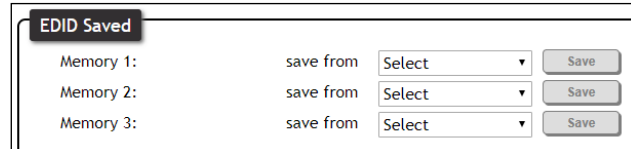


6. The SW32 will have EDID on pass through, with Output 1 downscaling 4K signal to 1080p automatically. To change the settings on this, go to the EDID page.
  - a. Select **EDID** from the top menu.
  - b. Select the internal or saved EDID from the drop down menu next to the corresponding port.
  - c. If no EDIDs have been saved, select the display from the EDID Saved Memory drop down and press the **Save** button.



**EDID Settings**

|       |                   |
|-------|-------------------|
| USBC  | Connected Display |
| HDMI1 | Connected Display |
| HDMI2 | Connected Display |



**EDID Saved**

|           |           |        |      |
|-----------|-----------|--------|------|
| Memory 1: | save from | Select | Save |
| Memory 2: | save from | Select | Save |
| Memory 3: | save from | Select | Save |

### EDID Selections

|                   |                                                                  |              |              |
|-------------------|------------------------------------------------------------------|--------------|--------------|
| Connected Display | Chooses the highest common resolution between source and display |              |              |
| Internal          | 3840x2160 2CH w/ HDR                                             | 1600x900 2CH | 1280x800 2CH |
|                   | 1920x1200 2CH                                                    | 1440x900 2CH | 1280x720 2CH |
|                   | 1920x1080 2CH                                                    | 1366x768 2CH | 1024x768 2CH |
| Saved             | 3 Memory slots                                                   |              |              |

### Control

The SW32 has the ability to control the display with CEC, RS-232, and TCP/IP. Each can be triggered through the webGUI, RS-232 commands, and IP commands.

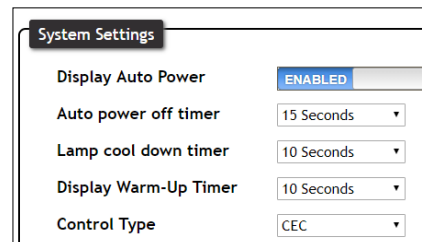
1. By Default, CEC will be set as the control type.
  - a. Select **Display** from the top menu.
  - b. Set the Auto power on/off parameters. Defaults are set to turn the display on/off after 15 seconds of signal loss or gain and to wait 10 seconds between on and off commands being sent after an on/off event.
  - c. Power on and off can be triggered through the webGUI by pressing the ON or OFF.
  - d. Power on and off can also be triggered by an RS-232 or TCP/IP command being sent to the unit. View the AT-OME-SW32 API found at [https://atlona.com/pdf/AT-OME-SW32\\_API.pdf](https://atlona.com/pdf/AT-OME-SW32_API.pdf) to see commands.



**CEC**

CEC Command

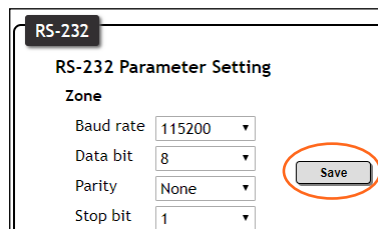
Power



**System Settings**

|                       |            |
|-----------------------|------------|
| Display Auto Power    | ENABLED    |
| Auto power off timer  | 15 Seconds |
| Lamp cool down timer  | 10 Seconds |
| Display Warm-Up Timer | 10 Seconds |
| Control Type          | CEC        |

2. The SW32 will have RS-232 zone control parameters automatically set. If using RS-232 control, ensure these parameters match the controlled device.
  - a. Select **RS-232** from the top menu.
  - b. Select the Baud rate, Data bit, Parity, and Stop bit from the drop down menus to match the device.
  - c. Press the **Save** button.



**RS-232**

**RS-232 Parameter Setting**

Zone

|           |        |
|-----------|--------|
| Baud rate | 115200 |
| Data bit  | 8      |
| Parity    | None   |
| Stop bit  | 1      |

- d. Select **Display** from the top menu.
- e. Set the Auto power on/off parameters. Defaults are set to turn the display on/off after 15 seconds of signal loss or gain and to wait 10 seconds between on and off commands being sent after an on/off event.
- f. Select **RS-232** from the Control Type drop down menu. New options will appear below the System Settings.

**System Settings**

Display Auto Power ENABLED

Auto power off timer 15 Seconds

Lamp cool down timer 10 Seconds

Display Warm-Up Timer 10 Seconds

Control Type CEC

**Control Type**

CEC  
 RS-232  
 IP  
 CEC

**RS232/IP commands**

Manufacturer Generic

Products Generic

Model Generic

Display Commands  
 [Please use \x as a delimiter for HEX values]

Repeat Command

Status DISABLED

Times 2

ON PW 1 Send

OFF PW 0 Send

Volume+ VOL+ Send

Volume- VOL- Send

Mute MUTE Send

Mute On MUTE ON Send

Mute Off MUTE OFF Send

Save Revert

- f. The commands are built in for a large variety of displays. Select the manufacturer, product type, and model from the drop down menus. Commands have been programmed into the unit for a wide range of products. If the current display is not found within the database, use generic and manually adjust the command fields.
- g. Press the **Save** button.

**RS232/IP commands**

Manufacturer Generic

Products Generic

Model Acer

Repeat Command

Status

Times

ON

OFF

Volume+

Volume-

Mute

Mute On

Mute Off

**RS232/IP commands**

Manufacturer Panasonic

Products Panasonic Projector

Model Panasonic Projector

Panasonic TV  
 Panasonic TV (Copy)

[Please use \x as a delimiter for HEX values]

3. The SW32 has the ability to control the display by TCP/IP commands. These commands can be triggered from the webGUI.
  - a. Select **Display** from the top menu.
  - b. Set the Auto power on/off parameters. Defaults are set to turn the display on/off after 15 seconds of signal loss or gain and to wait 10 seconds between on and off commands being sent after an on/off event.
  - c. Select **IP** from the Control Type drop down menu. New options will appear below the System Settings.

**System Settings**

Display Auto Power ENABLED

Auto power off timer 15 Seconds

Lamp cool down timer 10 Seconds

Display Warm-Up Timer 10 Seconds

Control Type CEC

**Control Type**

CEC  
 RS-232  
 IP  
 CEC

**TCP/IP Settings of Controlled Device**

|                                                                                           |                                                                                           |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>IP Mode</b> <span style="border: 1px solid black; padding: 2px;">Non-Login</span>      | <b>IP Mode</b> <span style="border: 1px solid black; padding: 2px;">Non-Login</span>      |
| <b>IP Address</b> <span style="border: 1px solid black; padding: 2px;">192.168.1.1</span> | <b>IP Address</b> <span style="border: 1px solid black; padding: 2px;">192.168.1.2</span> |
| <b>Port</b> <span style="border: 1px solid black; padding: 2px;">23</span>                | <b>Port</b> <span style="border: 1px solid black; padding: 2px;">23</span>                |
| <b>Username</b> <span style="border: 1px solid black; padding: 2px;">admin</span>         | <b>Username</b> <span style="border: 1px solid black; padding: 2px;">admin</span>         |
| <b>Password</b> <span style="border: 1px solid black; padding: 2px;">*****</span>         | <b>Password</b> <span style="border: 1px solid black; padding: 2px;">*****</span>         |

Save



**NOTE:** Currently only the first column is used. The second column will be for a future feature update.

- d. Set the IP information and mode to match the display's current settings. IP Mode will be default Non-Login, but can be set to login mode which will require the Username and Password to be entered in the corresponding fields to match the display's parameters. IP address and Port will be needed to send IP commands to the display.
- e. The commands are built in for a large variety of displays. Select the manufacturer, product type, and model from the drop down menus. Commands have been programmed into the unit for a wide range of products. If the current display is not found within the database, use generic and manually adjust the command fields.
- f. Press the **Save** button.

**RS232/IP commands**

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| <b>Manufacturer</b>   | <span style="border: 1px solid black; padding: 2px;">Generic</span>   |
| <b>Products</b>       | <span style="border: 1px solid black; padding: 2px;">Generic</span>   |
| <b>Model</b>          | <span style="border: 1px solid black; padding: 2px;">Acer</span>      |
| <b>Repeat Command</b> | <span style="border: 1px solid black; padding: 2px;">Epson</span>     |
| <b>Status</b>         | <span style="border: 1px solid black; padding: 2px;">Hitachi</span>   |
| <b>Times</b>          | <span style="border: 1px solid black; padding: 2px;">Infocus</span>   |
| <b>ON</b>             | <span style="border: 1px solid black; padding: 2px;">Lg</span>        |
| <b>OFF</b>            | <span style="border: 1px solid black; padding: 2px;">Nec</span>       |
| <b>Volume+</b>        | <span style="border: 1px solid black; padding: 2px;">Optoma</span>    |
| <b>Volume-</b>        | <span style="border: 1px solid black; padding: 2px;">Panasonic</span> |
| <b>Mute</b>           | <span style="border: 1px solid black; padding: 2px;">Pjlink</span>    |
| <b>Mute On</b>        | <span style="border: 1px solid black; padding: 2px;">Planar</span>    |
| <b>Mute Off</b>       | <span style="border: 1px solid black; padding: 2px;">Qomo</span>      |

**RS232/IP commands**

|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| <b>Manufacturer</b> | <span style="border: 1px solid black; padding: 2px;">Panasonic</span>           |
| <b>Products</b>     | <span style="border: 1px solid black; padding: 2px;">Panasonic Projector</span> |
| <b>Model</b>        | <span style="border: 1px solid black; padding: 2px;">Panasonic Projector</span> |
|                     | <span style="border: 1px solid black; padding: 2px;">Panasonic TV</span>        |
|                     | <span style="border: 1px solid black; padding: 2px;">Panasonic TV (Copy)</span> |

[Please use \x as a delimiter for HEX values]

## Specifications

| Connectors, Controls, and Indicators                         |                                                               |
|--------------------------------------------------------------|---------------------------------------------------------------|
| HDMI IN                                                      | 2 - Type A, 19-pin female                                     |
| HDMI OUT                                                     | 2 - Type A, 19-pin female                                     |
| USB-C IN                                                     | 1 - USB Type-C v3.1, 24-pin female, AV input (Alternate Mode) |
| FW                                                           | 1 - Mini-USB, 5-pin female                                    |
| AUDIO OUT                                                    | 1 - 5-pin captive screw, balanced / unbalanced 2-channel      |
| RS-232                                                       | 1 - 3-pin captive screw (bidirectional)                       |
| LAN                                                          | 1 - RJ45                                                      |
| DC 24V                                                       | 1 - 4-pin, locking                                            |
| PWR indicator                                                | 1 - LED, green                                                |
| LINK indicator                                               | 1 - LED, amber                                                |
| <b>Control Buttons:</b><br>INPUT, DISPLAY, IP MODE,<br>RESET | 4 - momentary, tact-type                                      |
| <b>Input Indicators:</b><br>USB-C, HDMI IN 1, HDMI IN 2      | 3 - LED, green                                                |

| Video                          |                                                                                                                                                                                        |                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| UHD/HD/SD                      | 4096x2160@60*/30/25/24Hz, 3840x2160@60*/30/25/24Hz, 1080p@60/59.9/50/30/29.97/25/24/23.98Hz, 1080i@30/29.94/25Hz, 720p@60/59.94/50Hz, 576p@50Hz, 576i@50Hz, 480p@60/59.96Hz, 480i@30Hz |                                                                  |
| VESA @ 60Hz                    | 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480                              |                                                                  |
| Scaler<br>(HDMI output 1 only) | IN                                                                                                                                                                                     | OUT                                                              |
|                                | 4K @ 24 Hz<br>4K @ 30 Hz<br>4K @ 60 Hz, 4:2:0                                                                                                                                          | 1080p @ 24 Hz<br>1080p @ 30 Hz<br>1080p @ 60 Hz (YUV/RGB, 4:4:4) |
| USB-C                          | Up to 4K/UHD @ 60Hz                                                                                                                                                                    |                                                                  |
| Color Space                    | YUV, RGB                                                                                                                                                                               |                                                                  |
| Chroma Subsampling             | 4:4:4, 4:2:2, 4:2:0                                                                                                                                                                    |                                                                  |
| Color Depth                    | 8-bit, 10-bit, 12-bit                                                                                                                                                                  |                                                                  |
| HDR                            | HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ up to 60Hz                                                                                                                         |                                                                  |

| Audio                     |                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| HDMI Pass-Through Formats | PCM 2.0, LPCM 5.1, LPCM 7.1, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X® |
| Analog Audio Format       | PCM 2.0                                                                                                                                                |
| Sample Rate               | 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz                                                                                         |
| Bit Rate                  | 24 Mb/s max                                                                                                                                            |

| Resolution / Distance | 4K/UHD - Feet / Meters |   | 1080p - Feet / Meters |    | HDR - Feet / Meters |   |
|-----------------------|------------------------|---|-----------------------|----|---------------------|---|
| HDMI IN/OUT           | 15                     | 5 | 30                    | 10 | 10                  | 3 |

| Signal      |          |
|-------------|----------|
| HDMI        | HDMI 2.0 |
| CEC Support | Yes      |
| HDCP        | 2.2      |

| Temperature   | Fahrenheit                 | Celsius   |
|---------------|----------------------------|-----------|
| Operating     | 32 to 122                  | 0 to 50   |
| Storage       | -4 to 140                  | -20 to 60 |
| Humidity (RH) | 20% to 60%, non-condensing |           |

| Power       |                                                           |
|-------------|-----------------------------------------------------------|
| Operational | 6.98 W                                                    |
| Idle        | 2.85 W                                                    |
| Supply      | Input: 100 - 240 V AC, 50/60 Hz<br>Output: 24 V / 2.7A DC |

| Dimensions | Inches             | Millimeters    |
|------------|--------------------|----------------|
| H x W x D  | 1.02 x 8.62 x 5.98 | 26 x 219 x 152 |

| Weight | Pounds | Kilograms |
|--------|--------|-----------|
| Device | 1.87   | 0.85      |

| Certification |             |
|---------------|-------------|
| Device        | CE, FCC, UL |

