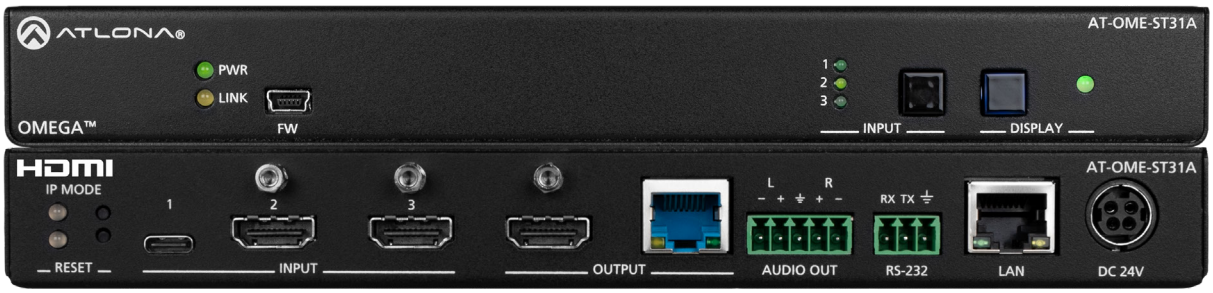
ATLONA
A division of HR

OMEGA™

4K / UHD
Three-Input Switcher
for HDMI and USB-C with HDBaseT™ and HDMI Outputs



AT-OME-ST31A | Atlona Manuals **Switchers**

Version Information

Version	Release Date	Notes
3	Jan 2024	- Firmware version 1.1.0 - Added AT-OCS-900N support/functionality - Added the ability to toggle HDMI +5v on the output

Sales, Marketing, and Customer Support

Main Office

Atlona Incorporated
1234 Lakeshore Dr Ste. 150
Coppell, TX 75019
United States

Office: +1.408.962.0515

Sales and Customer Service Hours
Monday - Friday: 8:00 a.m. - 6:30 p.m. (MST)

https://atlona.com/

International

+41 43 508 4321 (EMEA)
+65 6305 7575 (APAC)

Sales and Customer Service Hours
Monday - Friday: 09:00 - 17:00 (UTC +1)

Operating Notes

IMPORTANT: Visit http://atlona.com/product/AT-OME-ST31A for the latest firmware updates and User Manual.

Warranty

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

https://atlona.com/warranty/.

Safety and Certification

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCT 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.

Copyright, Trademark, and Registration

© 2025 Atlona Inc. All rights reserved. "Atlona" and the Atlona logo are registered trademarks of Atlona Inc. Pricing, specifications and availability subject to change without notice. Actual products, product images, and online product images may vary from images shown here.

The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Dolby, Dolby Atmos, and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.

For DTS patents, see http://patents.dts.com. Manufactured under license from DTS, Inc. DTS, the Symbol, DTS and the Symbol together, and Digital Surround are registered trademarks and/or trademarks of DTS, Inc. in the United States and/or other countries. © DTS, Inc. All Rights Reserved.

All other trademark(s), copyright(s), and registered technologies mentioned in this document are the properties of their respective owner(s).

Table of Contents

Introduction 6

Features 6

Package Contents 6

Panel Description 7

Installation 8
- Connection Instructions 8
  - Notes on Scaling 9
- Connection Diagram 10
- IP Configuration 11
  - Switching the IP Mode Using the Front Panel 11
  - Setting the IP Address using the Web Server 11
  - Auto IP Mode 12
  - Displaying the IP Address 12

Device Operation 13
- LED Indicators 13
- Input Switching 14
  - Manual Switching 14
- HDCP Content 15
- Controlling Audio 16
  - Audio Output Muting 16
  - De-Embedding Audio 16
- Password Management 18
- Resetting to Factory Defaults 19
  - Using the Rear Panel 19
  - Using the web Server 19

Configuration and Management Interfaces 20
- Introduction to the Web Server 20
  - Menu Bar 21
  - Info Page 22
  - A/V Settings Page 23
  - Display Page 25
  - RS-232 Page 28
  - EDID Page 29
  - Time Page 30
  - Config Page 31
  - System Page 32

Solution Setup and Configuration Guide 34
- Input Auto Switching 34
- Display Control 36
  - RS-232 over HDBaseT 36
  - IP Control 38
- Local RS-232 Control 41

Appendix 44
- Updating the Firmware 44
  - Using the Web Server 44
  - Using USB 45
- Integration with the AT-OCS-900N 47
- Mounting Instructions 49
- Specifications 51

Introduction

The Atlona **AT-OME-ST31A** is a 3×1 switcher and HDBaseT transmitter with HDMI and USB-C inputs. Part of the Omega™ Series of integration products for modern AV communications and collaboration, it features mirrored HDMI and HDBaseT outputs, two-channel audio de-embedding to an analog balanced audio output, and is HDCP 2.2 compliant. The USB-C input is ideal for AV interfacing for newer Mac®, Chromebook™, and Windows® PCs, as well as smartphones and tablets. Video signals up to 4K/60 4:2:0 can be transmitted over HDBaseT up to 330 feet (100 meters). All inputs and the local HDMI output support 4K HDR and 4K/60 4:4:4 at HDMI data rates up to 18 Gbps. Additionally, 4K downscaling to 1080p is available for the HDMI output when connected to an HD sink. The OME-ST31A is designed for use with Omega™ Series receivers and switchers, select HDVS Series receivers, the AT-UHD-EX-100CE-RX receiver, and other Atlona switchers with HDBaseT inputs.

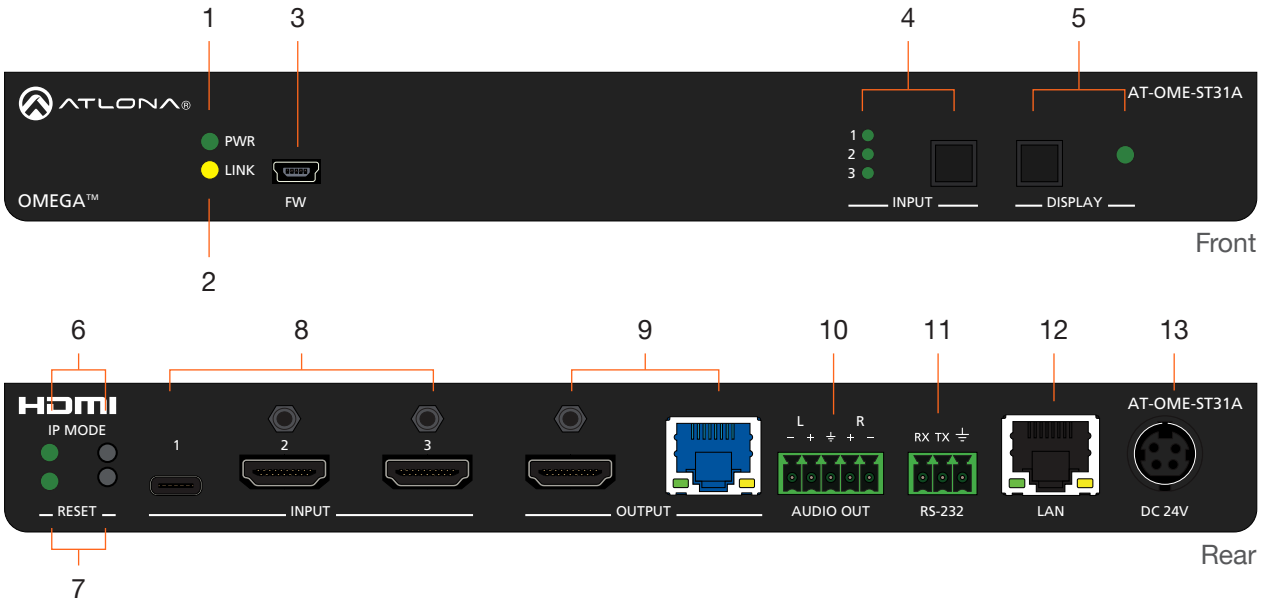
Features

- 3×1 HDBaseT switcherwith HDMI and USB-C inputs
- Mirrored HDBaseT and HDMI outputs
- Selectable 4K to 1080p downscaling
- Remote PoE (Power over Ethernet) over HDBaseT or local powering
- Automatic input selection and automatic display control
- Audio de-embedding

Package Contents

1 x AT-OME-ST31A
1 x USB-C cable
2 x Mounting brackets
4 x Mounting screws
1 x Installation Guide

Panel Description



1 PWR Indicator
This LED indicator glows solid green when the unit is powered.

2 LINK Indicator
This LED indicator glows solid yellow when an HDBaseT link is established, between the AT-OME-ST31A and the receiver.

3 FW
Connect a mini-USB cable from this port to update the firmware. Refer to Updating the Firmware (page 44) for more information.

4 INPUT button
Press and release this button to cycle through each of the inputs. The LED indicators will display the currently active input, and correspond to each of the numbered inputs on the rear panel of the unit.

5 DISPLAY button
Press this button to power-on or power-off the connected display.

6 IP MODE
Press and release this button to set the IP mode or display the current IP address on the connected display. Refer to IP Configuration (page 11) for more information.

7 RESET
Press and release this button to reset the unit to factory-default settings. Refer to Resetting to Factory Defaults (page 19) for more information.

8 INPUT ports
Connect a USB-C cable from a video source to **INPUT 1**. Connect HDMI cables to **INPUT 2** and **INPUT 3** from HD/UHD sources.

9 OUTPUT ports
Connect an HDMI from the HDMI port to a display or other sink device. Connect an Ethernet cable (CAT-5e or better), from the HDBaseT port to a compatible HDBaseT receiver. These ports are mirrored.

10 AUDIO OUT
Connect a 5-pin captive screw block to this port. This port provides audio de-embedding of the source to an audio output device.

11 RS-232
Connect the included 3-pin captive screw block to this port. Refer to Solution Setup and Configuration Guide (page 34) for more information.

12 LAN
Connect an Ethernet cable from this port to the network.

13 DC 24V
Connect the optional 24 V DC power supply to this power receptacle.

Installation

Connection Instructions

1. Connect HDMI cables from HD/UHD sources to **INPUT 2** and **INPUT 3**.
2. Connect a USB-C cable from a source to **INPUT 1** on the switcher.
3. Connect an Ethernet cable, from the **HDBaseT** port to a compatible HDBaseT receiver.

NOTE: The AT-OME-ST31A is powered by a receiver unit using PoE over HDBaseT. If a PoE over HDBaseT receiver is not used, then the AT-OME-ST31A must be powered using the optional 24 V DC power supply* (not included). When used with the external power supply, the AT-OME-ST31A can provide power to the connected USB-C device as well as a PoE over HDBaseT receiver. The power supply (part no. AT-PS-245-D4) can be purchased from Atlona.

Refer to the tables below for recommended cabling when using Altona products with HDBaseT technology. The green bars indicate the signal quality when using each type of cable. Higher-quality signals are represented by more bars. *These tables are for guidance, only. Performance may vary, based on environmental factors.*

Core	Shielding	CAT5e	CAT6	CAT6a	CAT7
Solid	UTP (unshielded)	▮	▮▮▮	▮▮▮▮	N/A
	STP (sheilded)	▮▮	▮▮▮▮	▮▮▮▮▮	▮▮▮▮▮

Cable	Max. Distance @ 4K	Max. Distance @ 1080p
CAT5e	295 feet (90 meters)	330 feet (100 meters)
CAT6a / CAT6a / CAT7	330 feet (100 meters)	330 feet (100 meters)

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

4. Connect an HDMI cable from the **HDMI** output port to a display or other sink device.

NOTE: The HDMI and HDBaseT **OUTPUT** ports are mirrored, meaning that the same A/V signal is transmitted over both ports.

5. Connect an Ethernet cable from the **LAN** port to the Local Area Network. This will allow access to the built-in web server, and provide remote control of the AT-OME-ST31A.
6. OPTIONAL: Connect an RS-232 cable from the control device to the **RS-232** port on the AT-OME-ST31A. Refer to Solution Setup and Configuration Guide (page 34) for more information.
7. OPTIONAL: Connect a 5-pin captive screw block to the AUDIO OUT port to provide audio de-embedding to an audio output device.

Notes on Scaling

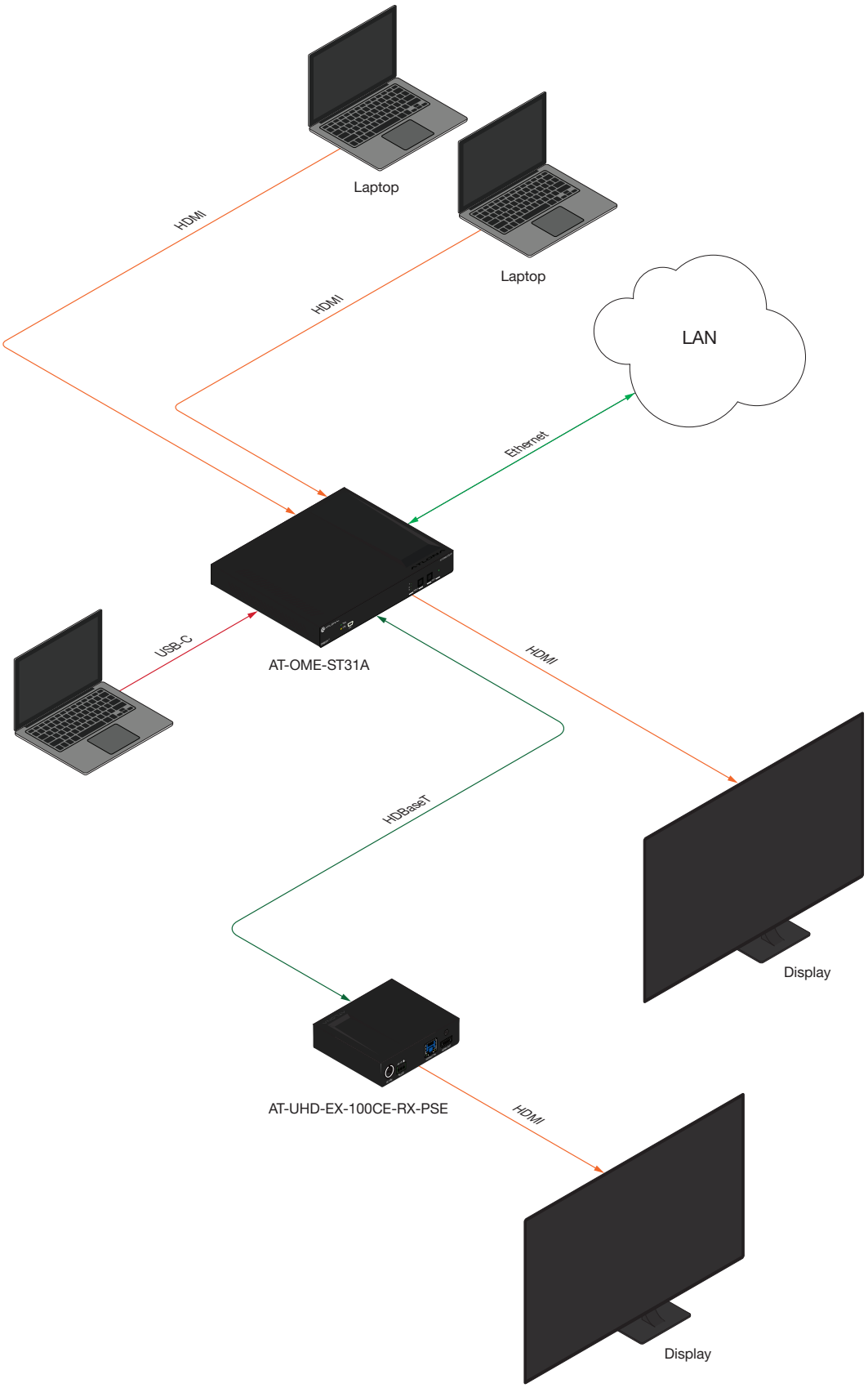
The following section provides important information about how the AT-OME-ST31A processes 4K (UHD) video signals.

1. The HDMI **OUTPUT** port supports up to 4K @ 60 Hz, 12-bit, with HDR.
2. If the source is 4K, and the HDMI **OUTPUT** port is connected to a 1080p (not 4K-capable) display, then the output will be down-scaled as follows:

Input	Output	
4K @ 24 Hz	1080p @ 24 Hz	
4K @ 30 Hz	1080p @ 30 Hz	
4K @ 60 Hz, 4:2:0	1080p @ 60 Hz, YUV/RGB 4:4:4	

3. HDR / Dolby Vision / HLG formats cannot be down-scaled to 1080p.
4. The internal scaler will be bypassed if the connected display supports the resolution and timing information from the source device.
5. The HDBaseT **OUTPUT** port supports up to 4K @ 60 Hz. However, HDR is only supported at lower resolutions.
6. The HDBaseT **OUTPUT** port will down-sample to 4:2:0, if the source is 4K @ 60 Hz, 4:4:4, 8-bit. However, the HDMI **OUTPUT** will remain at 4K @ 60 Hz, 4:4:4, 8-bit, if the output is connected to a 4K-capable display.

Connection Diagram



IP Configuration

The AT-OME-ST31A is shipped with DHCP enabled. Once connected to a network, the DHCP server (if available), will automatically assign an IP address to the unit. If the AT-OME-ST31A is unable to detect a DHCP server within 15 seconds, then the unit will use a self-assigned IP address within the range of 169.254.xxx.xxx.

Use an IP scanner, along with the MAC address on the bottom of the unit, to identify the unit on the network. If a static IP address is desired, the unit can be switched to static IP mode. The default static IP address is 192.168.1.254.

Switching the IP Mode Using the Front Panel

1. Make sure the AT-OME-ST31A is powered, by connecting an Ethernet cable between a compatible HDBaseT receiver, such as the AT-UHD-EX-RX-PSE or AT-HDVS-SC-RX, and the **HDBaseT** port on the back of the unit.
2. Press and hold the **IP MODE** button, on the rear of the unit.
3. Release the button once the LED indicator, next to the **IP MODE** button, begins to flash green. The number of flashes will indicate the currently selected IP mode.

PWR LED flashes	Description
Four	DHCP mode
Two	Factory Static IP mode (IP address set to 192.168.1.254)

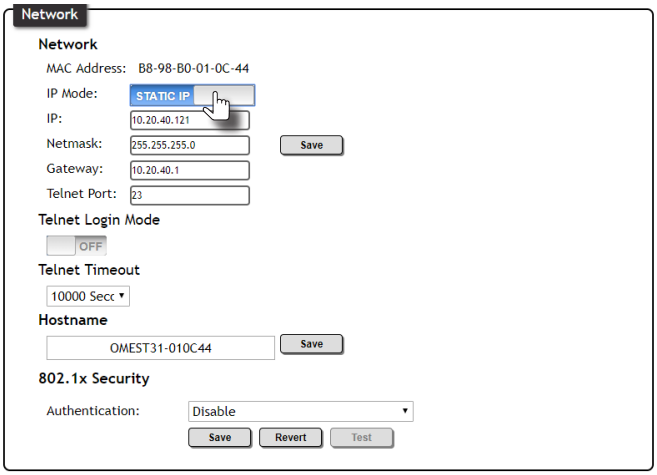
Setting the IP Address using the Web Server

Refer to the System Page (page 32) in the web server, to set the AT-OME-ST31A to either DHCP or static IP mode. In order to access the web server, the IP address of the AT-OME-ST31A must be known. By default, the AT-OME-ST31A is set to DHCP mode and will automatically be assigned an IP address by a DHCP server.

1. Open the desired web browser and enter the IP address of the AT-OME-ST31A. Refer to Introduction to the Web Server (page 20) for more information.
2. Log in, using the required credentials. The factory-default username and password are listed below.

   Username: admin
   Password: Atlona

3. Click **System** in the menu bar.
4. Click the **IP Mode** toggle and set it to the **STATIC IP** position.
5. Enter the IP address, subnet mask, and gateway in the **IP**, **Netmask**, and **Gateway** fields, respectively.
6. Click the **Save** button, next to the Netmask field, to commit all changes. To undo changes and revert to DHCP mode, click the **IP Mode** toggle.



Auto IP Mode

If the AT-OME-ST31A is unable to detect a DHCP server within 15 seconds, then the unit will use a self-assigned IP address within the range of 169.254.xxx.xxx. If this occurs, connect the AT-OME-ST31A to a computer running Microsoft Windows® and follow the procedure below.

1. Click **Start** > **Settings** > **Control Panel** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. Right-click on the adapter that is used to establish a wired connection to the network, and select **Properties** from the context menu.
4. Under the **Ethernet Properties** dialog box, select **Internet Protocol Version 4** and then click the **Properties** button.
5. Click the **Use the following IP address** radio button.

IMPORTANT: Before continuing, write down the current IP settings in order to restore them, later. If **Obtain an IP address automatically** and **Obtain DNS server automatically** are selected, then this step is not required.

6. Enter the desired static IP address or the IP address provided by the network administrator. If the PC does not require Internet access or if a statically-assigned IP address is being used, then an IP address of 169.254.xxx.xxx can be entered.
7. Set the subnet mask to 255.255.0.0.
8. Click the **OK** button then close all **Control Panel** windows.

Displaying the IP Address

To display the IP address of the AT-OME-ST31A, on the connected display, press and release the **IP MODE** button.

Device Operation

LED Indicators

The LED indicators on both the front and rear of the unit provide basic information on the current status of the AT-OME-ST31A.

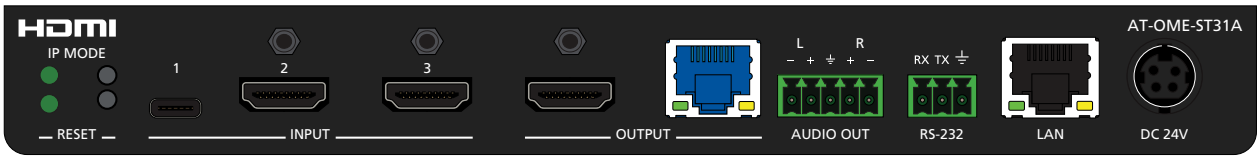
LED		Description
PWR	Solid green	• Unit is receiving power using the optional 24 V DC power supply (not included) or the Ethernet cable connected between the HDBaseT OUTPUT port and a PoE over HDBaseT-compatible receiver.
	Off	• Unit is not powered.
LINK	Solid yellow	• An HDBaseT link is established between the transmitter and the receiver.
	Off	• The link integrity between the AT-OME-ST31A and the HDBaseT receiver is compromised. • Check the HDBaseT connections and/or try a different cable.
1, 2, 3	Solid green	• The input is the currently selected (active) input.
	Off	• The input is not active.
IP MODE	Flash green (4x)	• Unit is being set to DHCP mode. Refer to Switching the IP Mode Using the Front Panel (page 11) for more information.
	Flash green (2x)	• Unit is being set to Static IP mode and will be assigned the IP address of 192.168.1.254.
	Off	• Normal operating mode.
RESET	Flash green (3x)	• Unit is being set to factory-default settings. Refer to Resetting to Factory Defaults (page 19) for more information.
	Off	• Normal operating mode.

Input Switching

Switching between any of the three input ports can be performed either manually or automatically. The following section covers both methods.

Manual Switching

1. Press and release the **INPUT** button on the front panel to cycle between **INPUT 1** (USB-C), **INPUT 2** (HDMI), and **INPUT 3** (HDMI) inputs. The **USB-C** input (INPUT 1) is the factory-default setting.



After the **INPUT** button is pressed, the INPUT LED indicator will display the currently active input. In this example, **INPUT 2** (HDMI) is the active input and is indicated by LED indicator **2**, on the front panel.

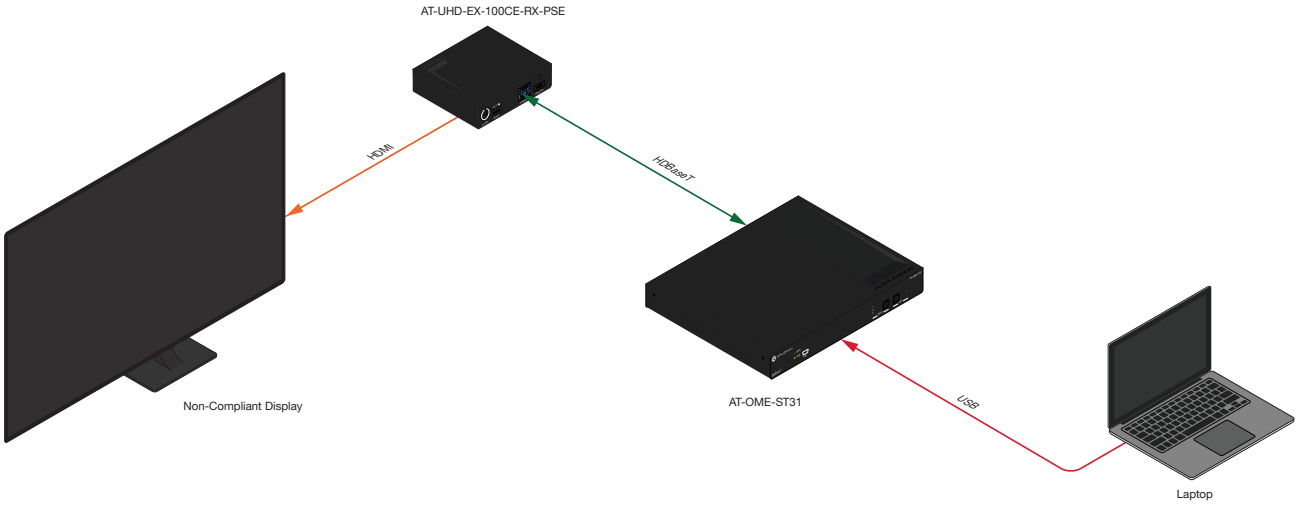
2. Press the **INPUT** button again to switch to **INPUT 3**.
3. Press the **INPUT** button once more to return to **INPUT 1**.

Manual input switching can also be performed under the A/V Settings Page (page 23) of the web server, by clicking the **Input Selection** drop-down list and selecting the desired input. In addition, the x1AVx1 command can also be used. Refer to the *Application Programmer's Interface* for more information.

NOTE: The AT-OME-ST31A retains the currently selected input, even after the unit is powered-off then powered-on.

HDCP Content

Normally, if a source is transmitting HDCP content to a display that is not HDCP-compatible, then the resulting image on the display can be “snow”, image flickering, or no picture. For example, in the illustration below, a laptop source is connected to the AT-OME-ST31A. A non-compliant display is connected to a receiver, which is connected to the AT-OME-ST31A using HDBaseT.

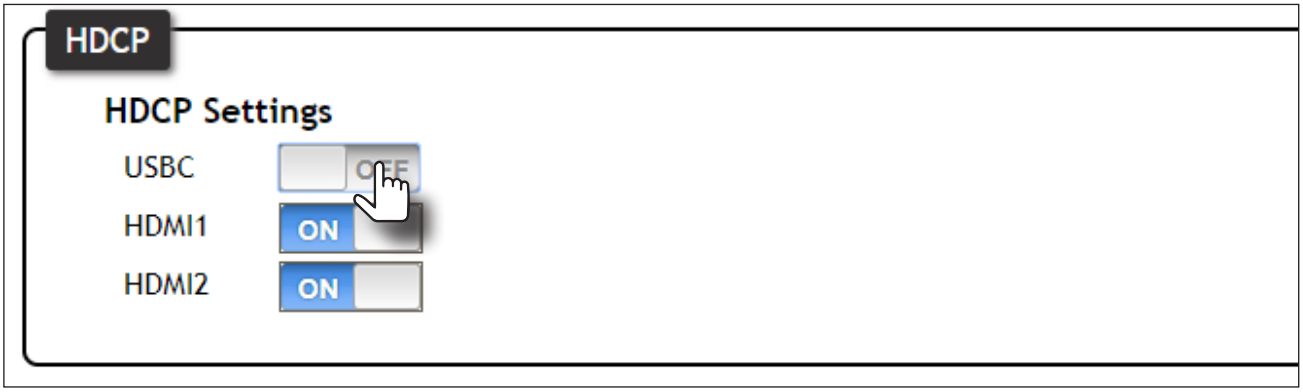


By default, the laptop may transmit HDCP content. However, when connected to a display that does not support HDCP, the laptop must be instructed to send non-HDCP content, in order for the content to be displayed.

1. Open the desired web browser and enter the IP address of the AT-OME-ST31A.
2. Log in as the **admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

   Username: admin
   Password: Atlona

3. Click **A/V Settings** in the menu bar and locate the **HDCP** section.
4. Click the **USBC** toggle switch and set it to the **OFF** position. This will instruct the source device to send non-HDCP content, if possible. If the display is unable to receive HDCP content, then a green splash screen will appear on the connected display.



NOTE: Not all source devices are capable of transmitting non-HDCP content. For example, Sony PlayStation® gaming consoles and Mac® computers always transmit HDCP-encrypted content.

Controlling Audio

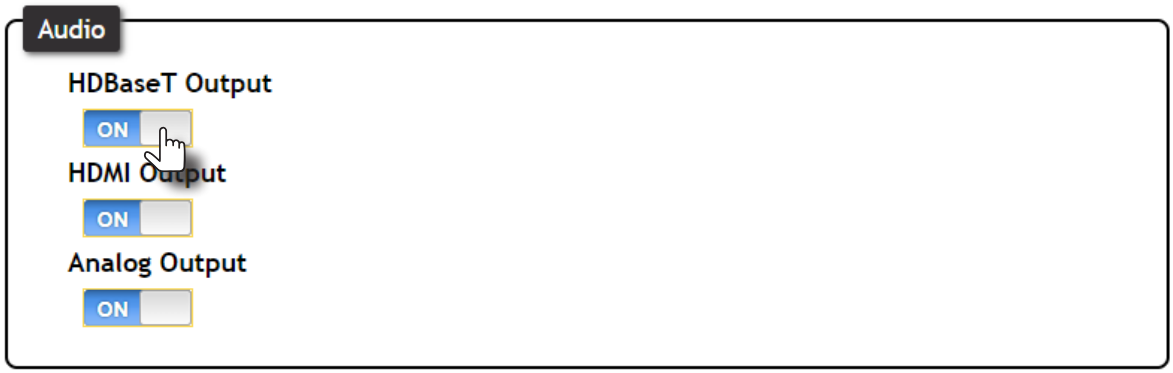
The AT-OME-ST31A provides complete control over both audio muting and audio input sources. Audio muting can be controlled on both HDMI and HDBaseT outputs. Analog audio can also be embedded on the HDBaseT or HDMI outputs using a 3.5 mm mini-stereo cable.

Audio Output Muting

1. Open the desired web browser and enter the IP address of the AT-OME-ST31A.
2. Log in as the **admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

   Username: admin
   Password: Atlona

3. Click **A/V Settings** in the menu bar.
4. Locate the **Audio** section.
5. Click the toggle switch for the desired output. To mute the audio output on the **HDBaseT Output**, click this toggle switch to the **OFF** position. To re-enable the audio for that output, set the toggle switch to the **ON** position.



De-Embedding Audio

IMPORTANT: The AT-OME-ST31A will only de-embed two-channel LPCM audio. Down-mixing mulitchannel audio to two-channel audio is not supported.

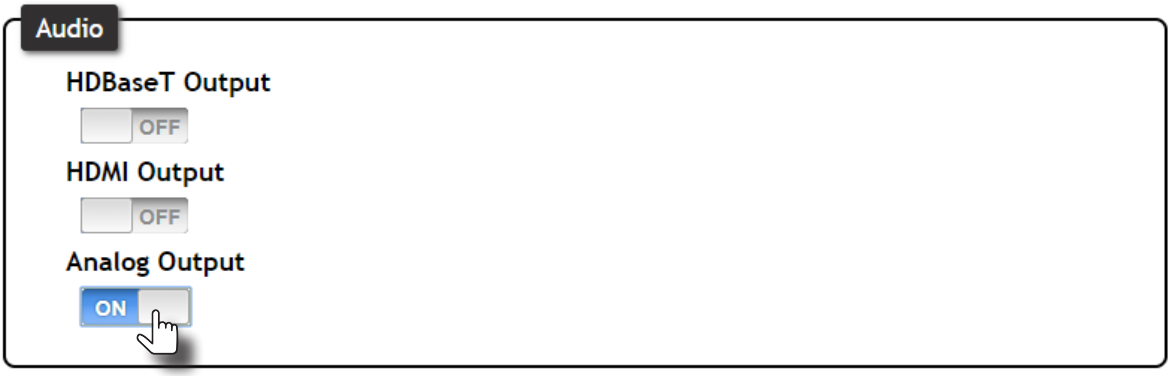
1. Open the desired web browser and enter the IP address of the AT-OME-ST31A.
2. Log in as the **admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

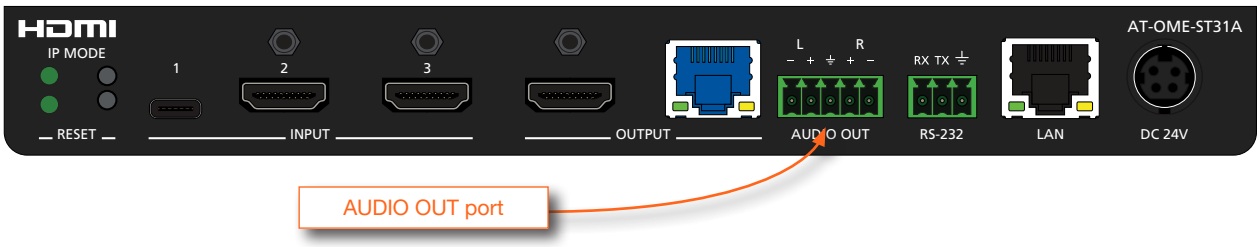
   Username: admin
   Password: Atlona

3. Click **A/V Settings** in the menu bar.

4. Locate the **Audio** section. Any of the three inputs can be set to receive either the existing digital audio from the source, or an external analog source.

5. Set the **Analog Output** toggle switch to the **ON** position. Audio from the source will be de-embedded and output on the **AUDIO OUT** port.





NOTE: Video must accompany the audio at all times. This product does not support audio-only ("free-run" mode) output.

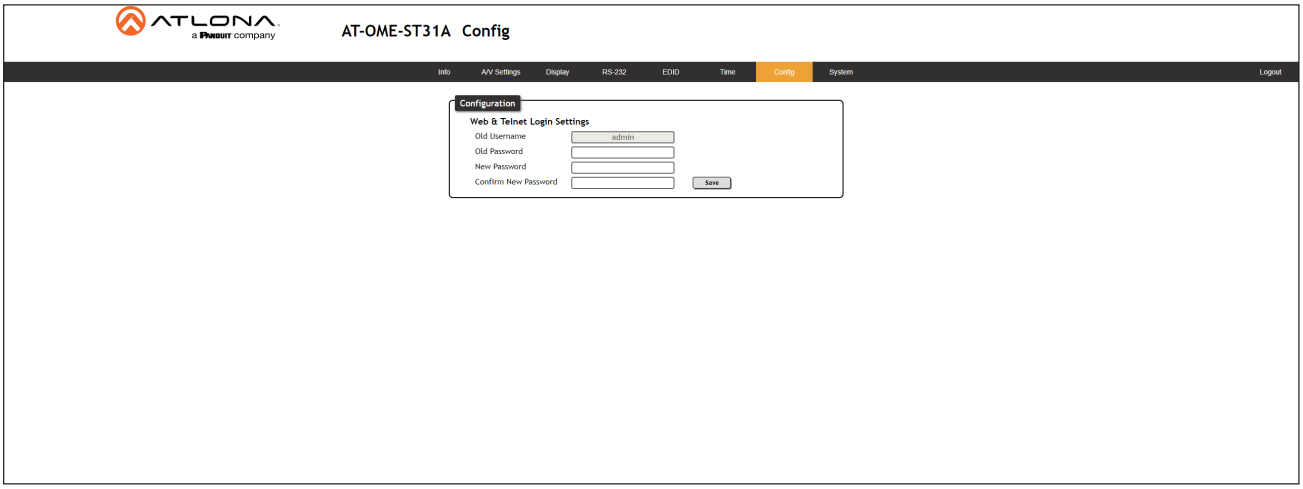
Password Management

The AT-OME-ST31A allows the administrator password to be changed. The password applies to both the web interface and Telnet sessions.

1. Open the desired web browser and enter the IP address of the AT-OME-ST31A.
2. Log in as the **admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

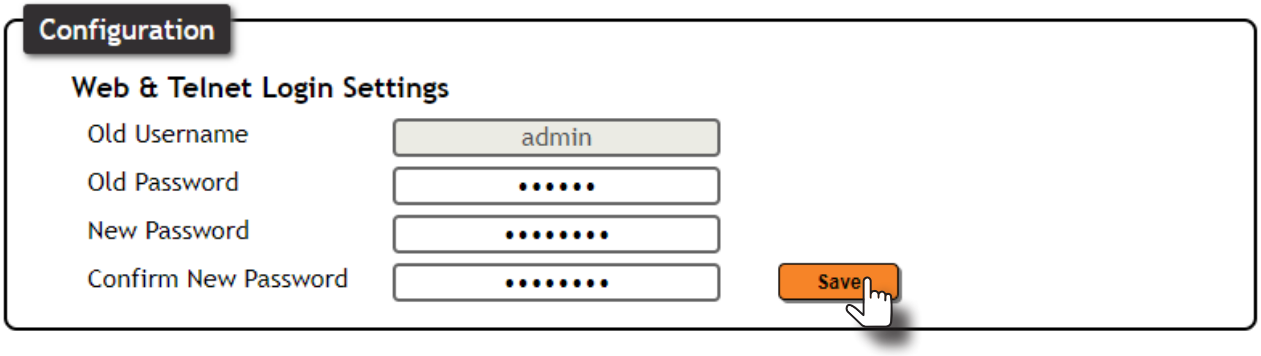
   Username: admin
   Password: Atlona

3. Click the **Config** tab.



4. Enter the current password in the **Old Password** field.
5. Enter the new password in the **New Password** field.
6. Retype the new password in the **Confirm New Password** field.

NOTE: Password fields will always be masked for security purposes.



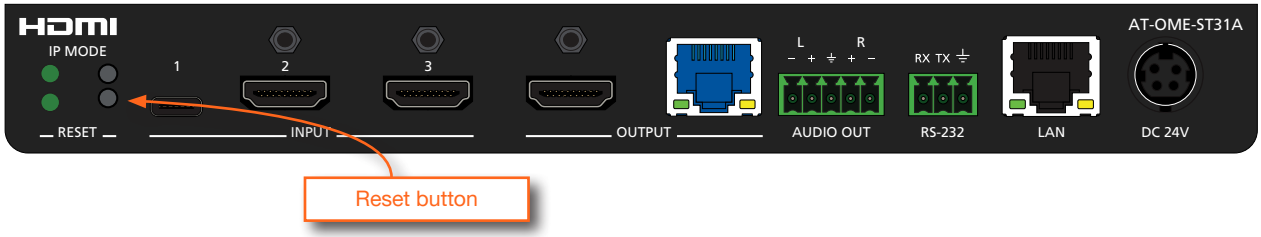
7. Click the **Save** button to commit changes. To login with the new username, click **Logout** in the upper-right corner of the screen, then enter the login credentials for the user on the **Login** page.

Resetting to Factory Defaults

If necessary, the AT-OME-ST31A can be reset to factory-default settings. Note that the AT-OME-ST31A will be placed in DHCP mode, as part of the reset procedure. The AT-OME-ST31A can also be reset through the web server. Both procedures will be covered in this section.

Using the Rear Panel

1. Press and hold the **RESET** button on the rear panel for approximately 10 seconds.
2. Release the **RESET** button once the LED indicator begins to flash. The LED indicator will flash three times to indicate that the reset procedure has completed.

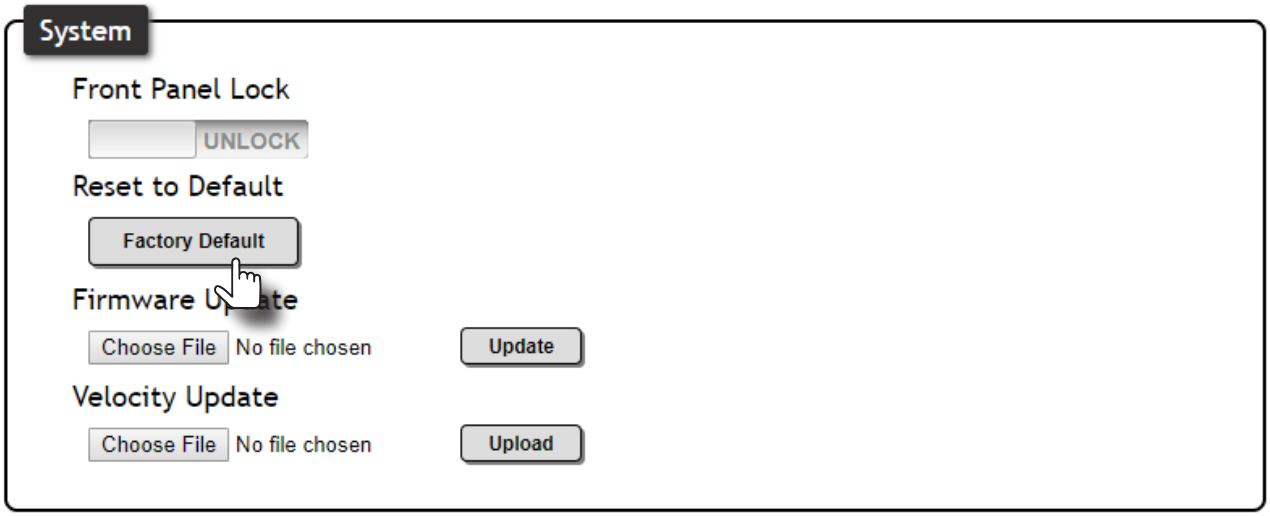


Using the web Server

1. Launch a web browser and login to the web server. Refer to Introduction to the Web Server (page 20) for more information. The default username and password are listed below:

   Username: **admin**
   Password: **Atlona**

2. Click **System** in the menu bar and locate the **System** section.
3. Click the **Factory Default** button.



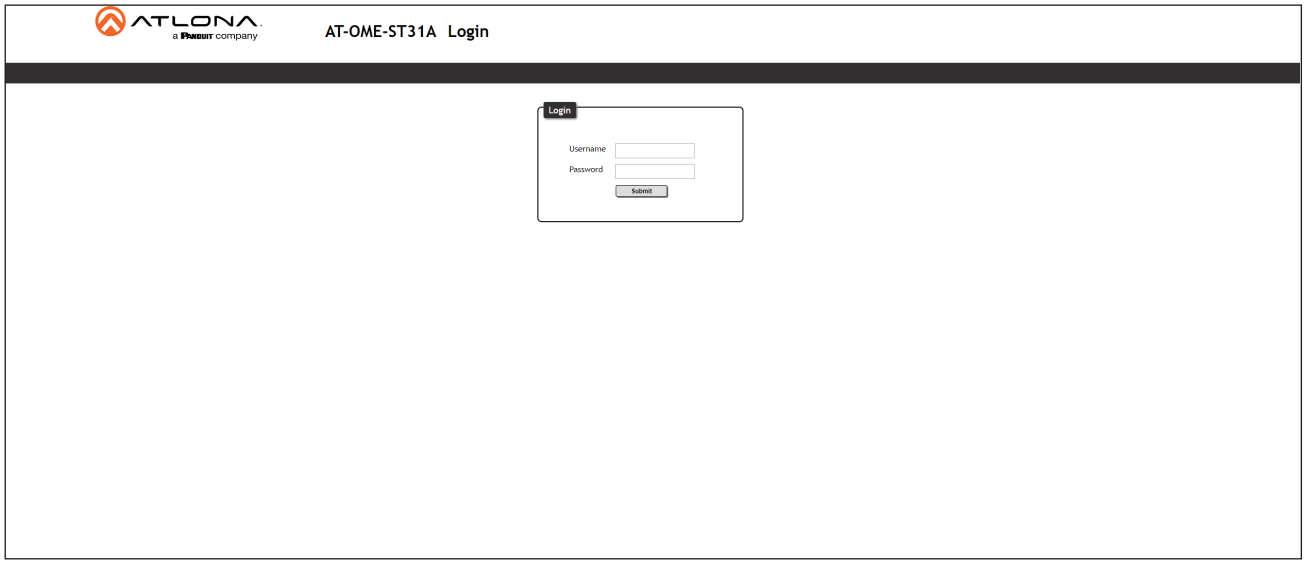
4. Once the **Login** screen appears, the reset procedure will be complete.

Configuration and Management Interfaces

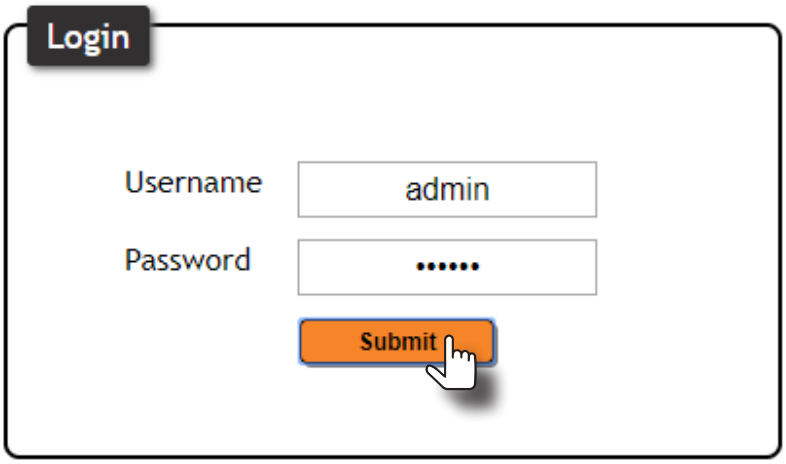
Introduction to the Web Server

The AT-OME-ST31A includes a built-in web server. Atlona recommends that the web server be used to set up the AT-OME-ST31A, as it provides intuitive management of all features. Follow the instructions below to access the webGUI.

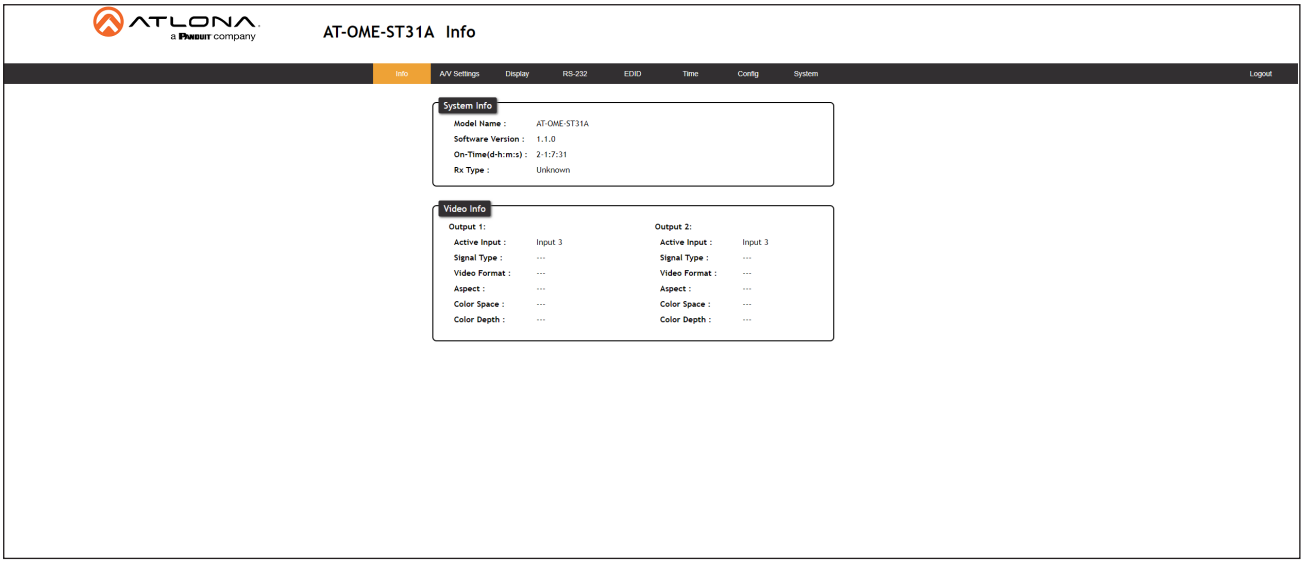
1. Make sure that an Ethernet cable is connected between the LAN port on the AT-OME-ST31A and the network.
2. Launch a web browser and enter the IP address of the unit. If the default static IP address is being used, enter 192.168.1.254.
3. The AT-OME-ST31A **Login** page will be displayed.



4. Type admin, using lower-case characters, in the **User** field.
5. Type Atlona in the **Password** field. This is the default password. The password field is case-sensitive. When the password is entered, it will be masked.
6. Click the **Login** button or press the ENTER key on the keyboard.

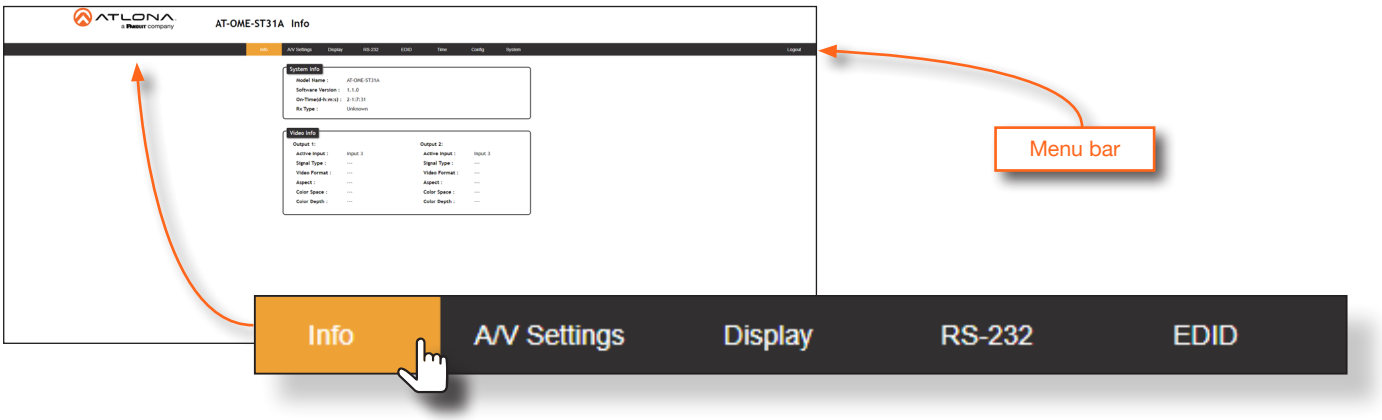


7. The **Info** page will be displayed.

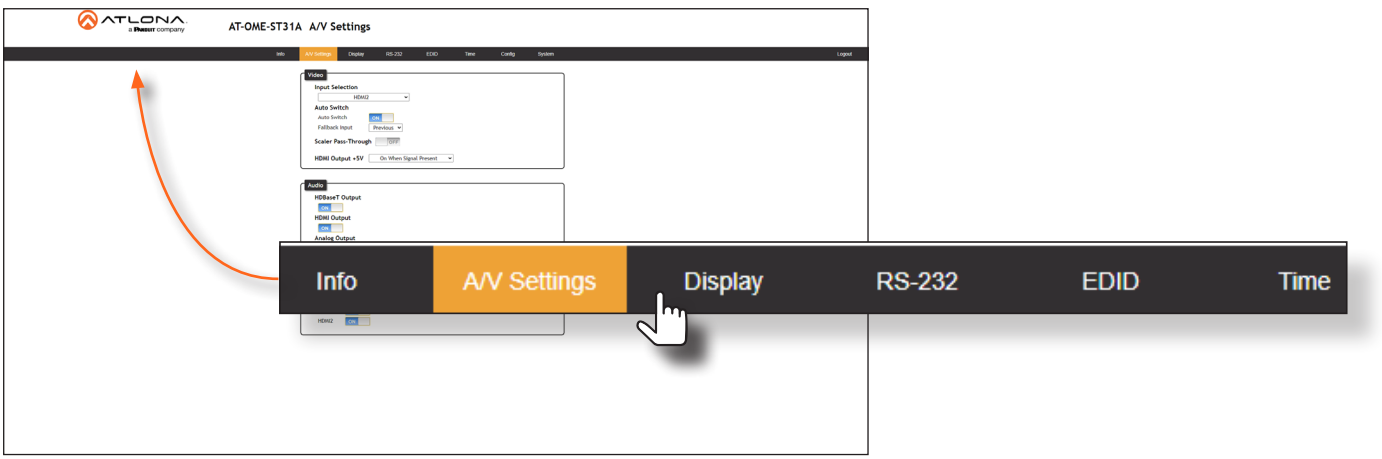


Menu Bar

The dark-colored bar, near the top of the screen, is the menu bar. When the mouse is moved over each menu element, it will be highlighted in light orange. Once the desired menu element is highlighted, click the left mouse button to access the settings within the menu.

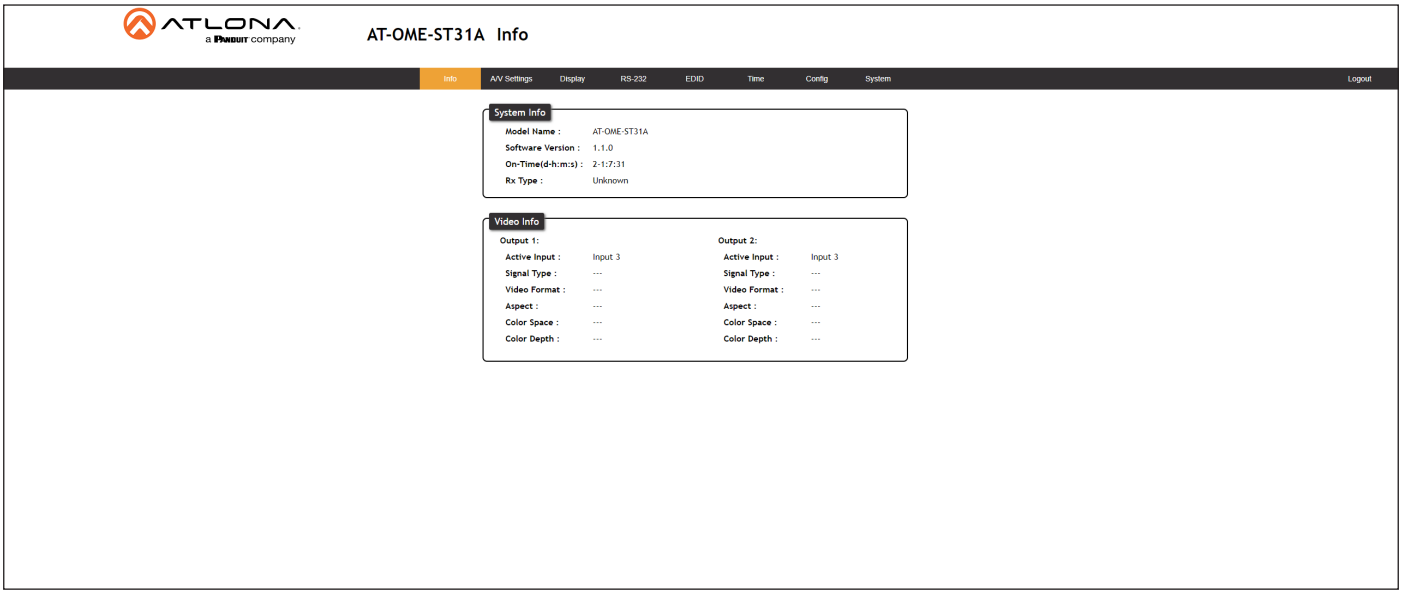


In this example, clicking **A/V Settings**, in the menu bar, will display the **A/V Settings** page.



Info Page

After logging in, the **Info** page will be displayed. The **Info** page provides various information about the receiver, including the model name, software version, and video information.



Model Name
The model SKU of this product.

Software Version
The version of firmware that the AT-OME-ST31A is running. Always make sure to check the AT-OME-ST31A product page, on the Atlona web site, for the latest version of firmware.

On-Time(d-h:m:s)
Displays how long the system has been powered since the last reboot/reset.

RxType
If a receiver is connected to the AT-OME-ST31A, then it will be displayed in this field. Otherwise, "Unknown" will be displayed if no receiver is connected.

Active Input
The currently selected (active) input.

Signal Type
The type of input signal.

Video Format
The input resolution of the source device.

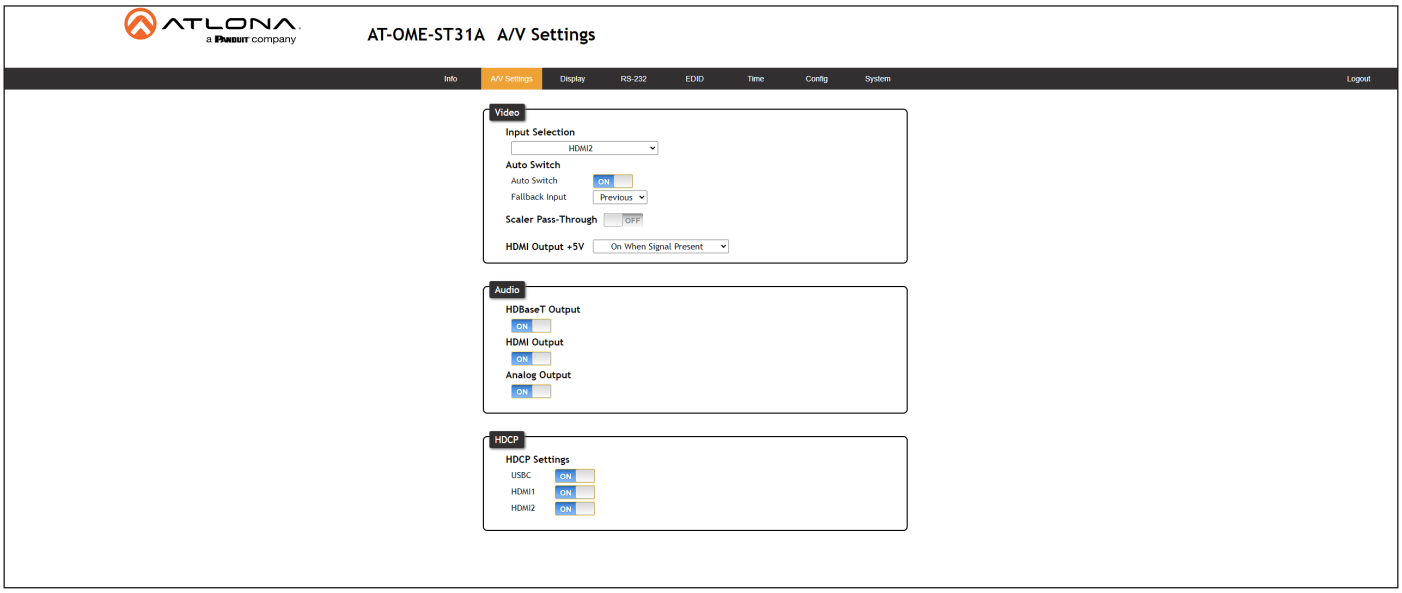
Aspect
Aspect ratio of the input signal.

Color Space
Displays the color space and chroma sub-sampling of the input signal.

Color Depth
The color depth of the input signal.

A/V Settings Page

The **A/V Settings** page is divided into three sections: **Video**, **Audio**, and **HDCP**. The **Video** section allows the preferred input timing to be selected as well as whether or not HDCP content is allowed to pass. The **Audio** section provides muting options for the audio output. The **HDCP** section provides management of HDCP and non-HDCP content.



Input Selection

Click this drop-down list to manually select the desired input.

Input	Description
USBC	Sets **INPUT 1** as the active input.
HDMI1	Sets **INPUT 2** as the active input.
HDMI2	Sets **INPUT 3** as the active input.

Auto Switch

Three controls are available under the Auto Switch feature.

- **Auto Switch**
  Click this toggle switch to enable or disable auto-switching. When enabled, the AT-OME-ST31A will automatically switch to the another port, if the signal is disrupted on the currently active input. The port to be switched to, is defined in the **Fallback Input** drop-down list. Refer to Input Switching (page 14) for more information.

- **Fallback Input**
  Click this drop-down list to select the fallback port. If the source is disconnected from the active port, then the switcher can be configured to automatically switch to the desired port. Click the **Auto Switch mode** toggle to enable or disable auto-switching.

Input	Description
Previous	Automatically switches to the input that was connected last.
USBC	Switches to the **INPUT 1**.
HDMI1	Switches to the **INPUT 2**.
HDMI2	Switches to the **INPUT 3**.

Scaler Pass-Through
Click this toggle switch to enable or disable the scaler pass-through feature. When set to the **ON** position, no scaler processing is used and the output resolution / timing will be the same as the input source. When disabled (**OFF**), 4K content will be down-scaled to 1080p. By default, this feature is set to the **OFF** position, which provides scaling capability.

HDMI Output +5V
Sets the +5V pin on the HDMI connector to the desired setting.

Setting	Description
Always On	Forces the +5V pin on the HDMI output to "high" (always on).
On When Signal Present	Allows the +5V pin on the HDMI output to toggle, based on the presence of an input video signal.

Audio
Manages audio settings for inputs and outputs.

- **HDBaseT Output**
  Set this toggle to the **OFF** position to mute the audio on the **HDBaseT OUTPUT** port. The default setting is **ON**.
- **HDMI Output**
  Set this toggle to the **OFF** position to mute the audio on the **HDMI OUTPUT** port. The default setting is **ON**.
- **Analog Output**
  Set this toggle to the **OFF** position to mute the audio on the **AUDIO OUT** port. To de-embed audio from the source, set this toggle to the **ON** position. The default setting is **ON**.

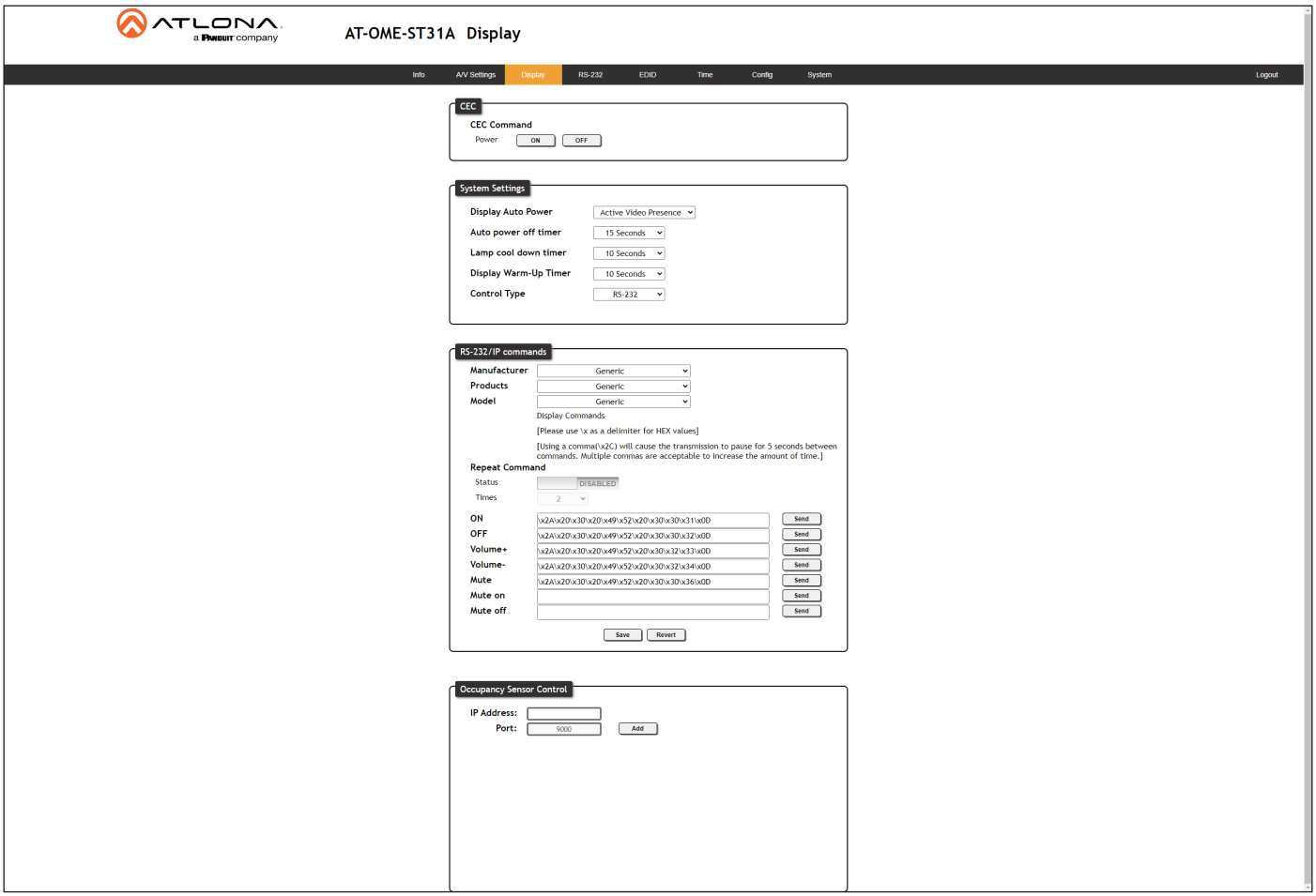
IMPORTANT: The AT-OME-ST31A will only de-embed two-channel LPCM audio. Down-mixing mulitchannel audio to two-channel audio is not supported.

HDCP
Each input provides control of how HDCP content is handled. Some source devices will send HDCP content if an HDCP-compliant display (sink) is detected. However, there may be applications where sending HDCP content is not desired. Setting the port to the **OFF** position, will instruct the source to send non-HDCP content to the display. Note that not all sources have this capability.

NOTE: Setting this feature to **OFF**, for any source, does *not* provide decryption of HDCP content to non-HDCP compliant sink devices. Sources such as Mac® computers and the Sony PlayStation® will *always* transmit HDCP content.

- **ON**
  When set to **ON**, the source will transmit HDCP content to the AT-OME-ST31A.
- **OFF**
  When set to **OFF**, non-HDCP content will be transmitted (if possible) to the AT-OME-ST31A.

Display Page



CEC Command

Click the ON button to send the power-on command to the display device. Click the **OFF** button to toggle the power state to off.

Consumer Electronics Control (CEC): Atlona has confirmed proper CEC functionality with several current models of Samsung, Panasonic, and Sony displays. However, it is not guaranteed that CEC will work with all displays. Many manufacturers do not support the CEC "off" command, and older displays use proprietary commands. Atlona only supports displays that use the CEC command structure defined in HDMI 1.2a. It is recommended that dealers request an evaluation product from Atlona, before designing a system using the CEC protocol. If this is not possible, then other control methods will need to be considered, in order to control displays using Atlona products.

Display Auto Power

Click this drop-down list to select the method of display control. The following options are available.

Modes	Description
`Active Video Presence*`	The AT-OME-ST31A will power-off the display if no active source is detected on the input. Conversely, the display will power-on when an active source is detected. This applies to either physical source connections or casting. The **Auto power off timer** interval must expire before the power-off command is sent.
`Active Video Presence w/Occupancy Sensor*`	Similar to the `Active Video Presence` mode, except that an occupancy sensor can also be used to determine when the power-off or power-on command is sent.
`Occupancy Sensor only`	The AT-OME-ST31A will power-on/power-off the display based on the state of the occupancy sensor. The occupancy sensor must be wired to the AT-OME-ST31A.
`Disabled`	No display control

*Auto Switching must be enabled to use these control methods.

Auto power off timer
Sends the command to power-off the display when an A/V signal is no longer present. Click the toggle to enable or disable this feature.

Lamp cool down timer
Sets the cool-down interval, in seconds, before the projector can be powered-off. During this time interval, the projector will not accept any “power on” or “power off” commands until the last “power off” command has been processed and the projector lamp has completed the cool-down cycle. Range: 0 to 300.

Display Warm-Up Timer
Click this drop-down list to select the display warm-up time interval. Range: 10 to 300. The default value is 10 seconds.

Control Type
Sets the control method for sending commands. The following options are available: RS-232, IP, CEC.

Setting	Description
RS-232	RS-232 is used to send commands.
IP	Commands are sent over IP.
CEC	Uses CEC to send commands.

RS-232 / IP Commands
Provides customization of RS-232 / IP control device commands.

- **Manufacturer**
  Click this drop-down list to select the manufacturer of the control device.
- **Products**
  Click this drop-down list to select the product. Available options are based on the selection in the **Manufacturer** drop-down list.
- **Model**
  Click this drop-down list to select the model. Available options are based on the selection in the **Products** drop-down list.

Repeat Command

- **Status**
  Click this toggle switch to set to **ENABLE** or **DISABLED**. Enabling this feature will re-send the command. Specify the number of times that the command is transmitted by setting the **Times** value. This feature is set to **DISABLED** by default.
- **Times**
  Click this drop-down list to specify the number of times the command is sent. When the **Status** toggle switch is set to **ENABLE**, the default number of times is set to 2.

ON, **OFF**, **Volume+**, **Volume-**, **Mute**, **Mute on**, **Mute off**
These fields will need to be populated with the correct strings (either hex or ASCII format) for each function, which control the display device. If hexadecimal values are used, then use the /x delimiter at the end of the command string.

Occupancy Sensor Control

The AT-OME-ST31A supports the AT-OCS-900N occupancy sensor. This feature is supported on firmware version 1.1.2 and greater. Refer to Integration with the AT-OCS-900N (page 47) for instructions on connecting to the occupancy sensor.

IP Address
Enter the IP address of the AT-OCS-900N in this field.

Port
The port number used to communicate with the AT-OCS-900N.

Add
Click this button to add the AT-OCS-900N to the AT-OME-ST31A. Up to three occupancy sensors are supported.

RS-232 Page

RS-232 Parameter Setting
This section allows the RS-232 settings to be specified for HDBaseT and Console.

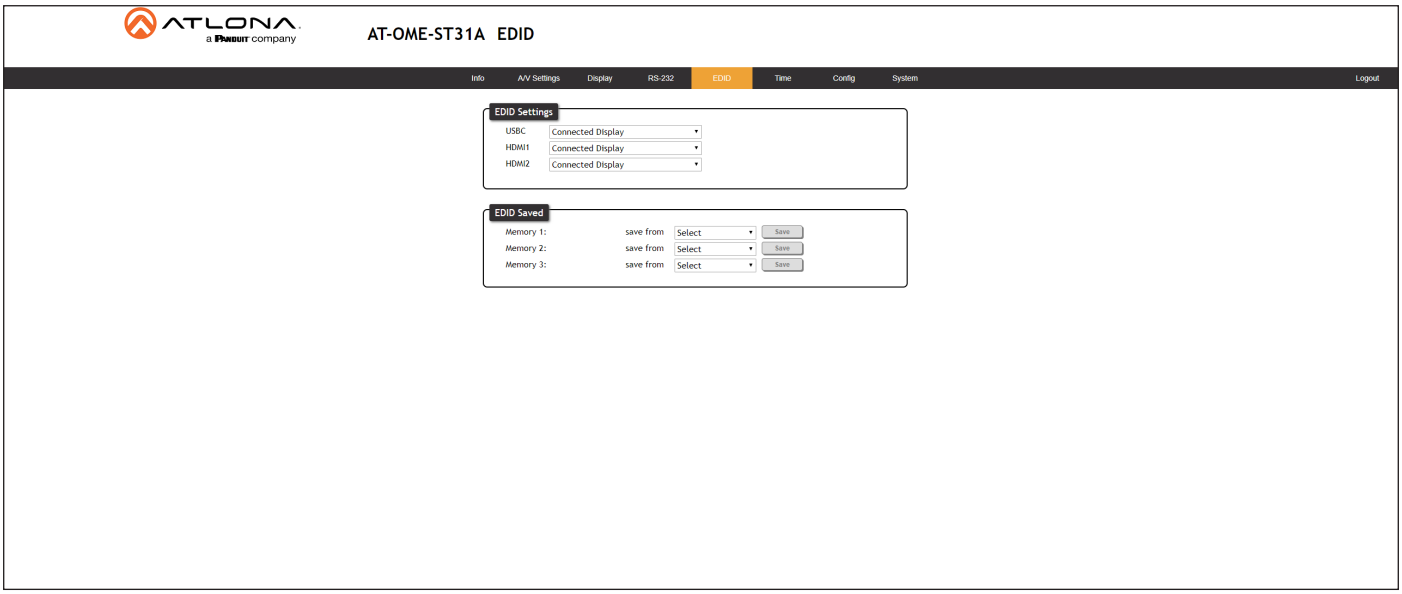
- **RS232 over HDBaseT**
  If the AT-OME-ST31A is connected to a device such as the AT-UHD-EX-100CE-RX-PSE, the drop-down list boxes will be disabled and the HDBaseT baud rate will be locked at 115200. If the AT-OME-ST31A is connected to another HDBaseT device, such as the AT-UHD-CLSO-824, each of these drop-down list boxes can be set to the baud rate of the HDBaseT RS-232 settings on the corresponding device. Refer to Solution Setup and Configuration Guide (page 34) for more information.

- **RS232 Console**
  When the AT-OME-ST31A is connected to a device, such as the AT-HDVS-200-RX, the drop-down list boxes will be disabled and the HDBaseT baud rate will be locked at 115200.

Setting	Description
Baud rate	Sets the baud rate. The following options are available: 2400, 9600, 19200, 38400, 56000, 57600, 115200.
Data bit	Sets the number of data bits used to represent each character of data. The following options are available: 7 or 8.
Parity	Sets the parity bit, which can be included with each character to detect errors during the transmission of data. The following options are available: None, Odd, or Even.
Stop bit	Sets the stop bit. Stop bits are sent at the end of each character, allowing the client to detect the end of a character stream. The following options are available: 1 or 2.

- **Save**
  Click this button to commit all changes.

EDID Page

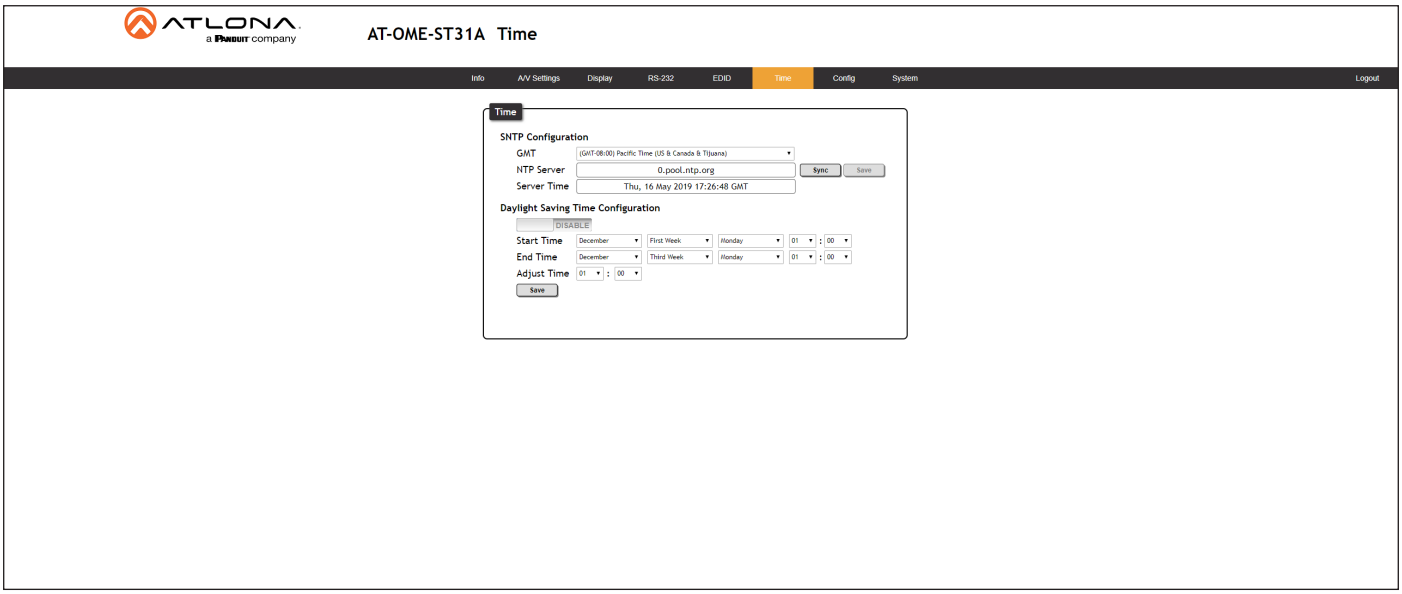


EDID Settings
Click these drop-down lists to select the desired EDID to be used for each input. The following EDID presets are available. When selecting an EDID, make sure that the display/sink device is capable of supporting the resolution/timing. If the sink device is not able to support a feature, then the source will not be displayed. Selecting the **Connected Display** EDID will provide the most compatible settings for most displays. In addition, three memory locations are available for storing captured EDID data.

EDID listing	
Connected Display	1440x900 2CH
3840x2160 2CH - NO HDR Support	1366x768 2CH
1920x1200 2CH	1280x800 2CH
1920x1080 2CH	1280x720 2CH
1920x1080 MCH	1024x768 2CH
1600x900 2CH	

EDID Saved
The AT-OME-ST31A provides eight memory locations used for storing captured EDID data. Click these drop-down lists to select and store the external EDID.

Time Page



SNTP Configuration
Simple Network Time Protocol (SNTP) is a simplified version of the Network Time Protocol (NTP), and can be used to set the time for the unit. SNTP is used to receive time services from other servers. However, it cannot be used to provide time servers to other systems.

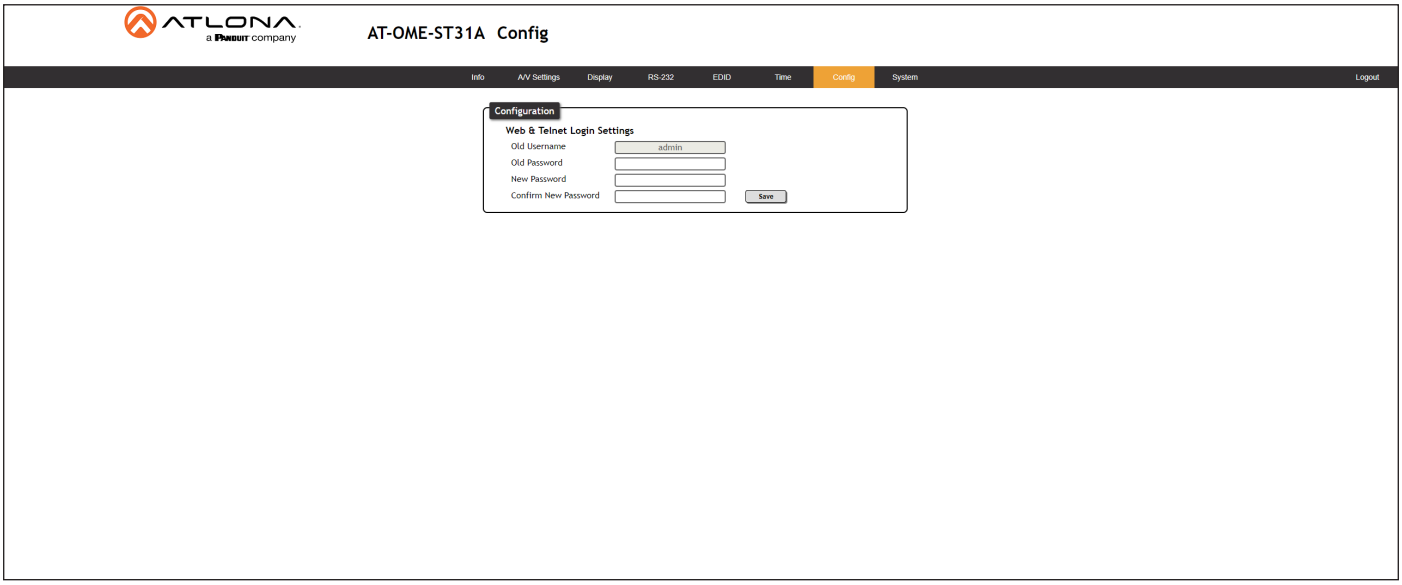
- **GMT**
  Click this drop-down list to select the Greenwich Mean Time (GMT) for the current location.
- **NTP Server**
  Enter the desired NTP server address in this field. After entering the NTP server address, click the **Sync** button.
- **Sync button**
  Click this button to sync with the server, after entering the desired NTP server address.
- **Save button**
  Click this button to commit changes to the NTP Server field. If a save is not performed, then the NTP server address will not be saved.
- **Server Time**
  This field will display the current time.

Daylight Saving Time Configuration
Click the toggle switch button to **ENABLE** or **DISABLE** Daylight Saving Time (DST). This feature is disabled by default.

- **Start Time**
  Click each of these drop-down lists to select the month, week, day, and time (HH:MM) when DST begins.
- **End Time**
  Click each of these drop-down lists to select the month, week, day, and time (HH:MM) when DST ends.
- **Adjust Time**
  Click these drop-down lists to set the hour and minute to adjust the clock for DST.
- **Save**
  Click this button to commit all changes.

Config Page

The **Config** page provides management of the administrator password. The administrator username ("admin") cannot be changed.



Old Username
This field cannot be changed. "admin" is the administrator user.

Old Password
Enter the current password for the "admin" username in this field. The default password is "Atlona".

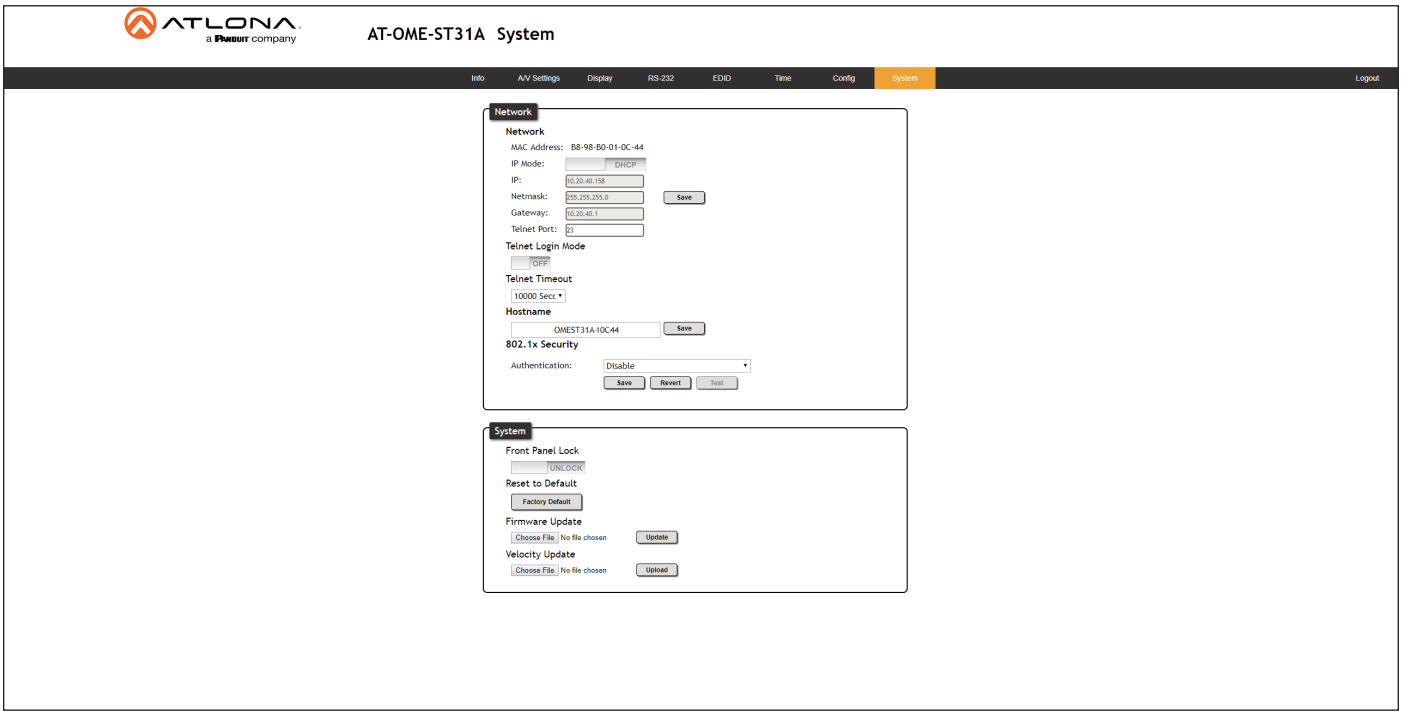
New Password
Enter the new password fro the "admin" username in this field.

Confirm New Password
Verify the new password by retyping it in this field.

Save
Click this button to commit all changes.

System Page

The **System** page is divided into two sections: **Network** and **System**. The **Network** section allows configuration of the IP settings of the AT-OME-ST31A. The **System** section provides controls for resetting the AT-OME-ST31A to factory-default settings and updating the firmware.



MAC Address
This field displays the MAC address of the AT-OME-ST31A.

IP Mode
Click this toggle switch to set the AT-OME-ST31A to **DHCP** or **STATIC IP** mode. The default setting is **DHCP** mode.

IP
Enter the IP address of the AT-OME-ST31A in this field. This field will only be available when **IP Mode** is set to **STATIC IP**. The default static IP address of the AT-OME-ST31A is 192.168.1.254.

Netmask
Enter the subnet mask of the AT-OME-ST31A in this field. This field will only be available when **IP Mode** is set to **STATIC IP**.

Gateway
Enter the gateway (router) IP address in this field. This field will only be available when **IP Mode** is set to **STATIC IP**.

Telnet Port
Enter the desired Telnet port (for Telnet sessions) in this field. The default port is 23.

Telnet Login Mode
Click this toggle switch to set the Telnet Login Mode to **ON** or **OFF**. If set to **ON**, then login credentials (same as web server) will be required when starting a Telnet session.

Telnet Timeout
Click this drop-down list to select the timeout interval, in seconds. Range is: 1 to 10000 seconds, or Never.

Hostname
Displays the hostname of the AT-OME-ST31A, as it would appear on a network. To change the hostname, type the new hostname in this field and click the **Save** button.

Authentication
Click this drop-down list to select the authentication method when using the 802.1x security protocol.

Front Panel Lock

Click this toggle switch to **LOCK** or **UNLOCK** the AT-OME-ST31A.

Reset to Default
Click the **Factory Default** button to reset the AT-OME-ST31A to factory-default settings.

Firmware Update
Click the **Choose File** button to begin the firmware update procedure. Refer to Updating the Firmware (page 44) for more information.

Velocity Update
Click the **Choose File** button to update the AT-OME-ST31A, within Velocity.

Solution Setup and Configuration Guide

The following sections provide step-by-step instructions for the following topics:

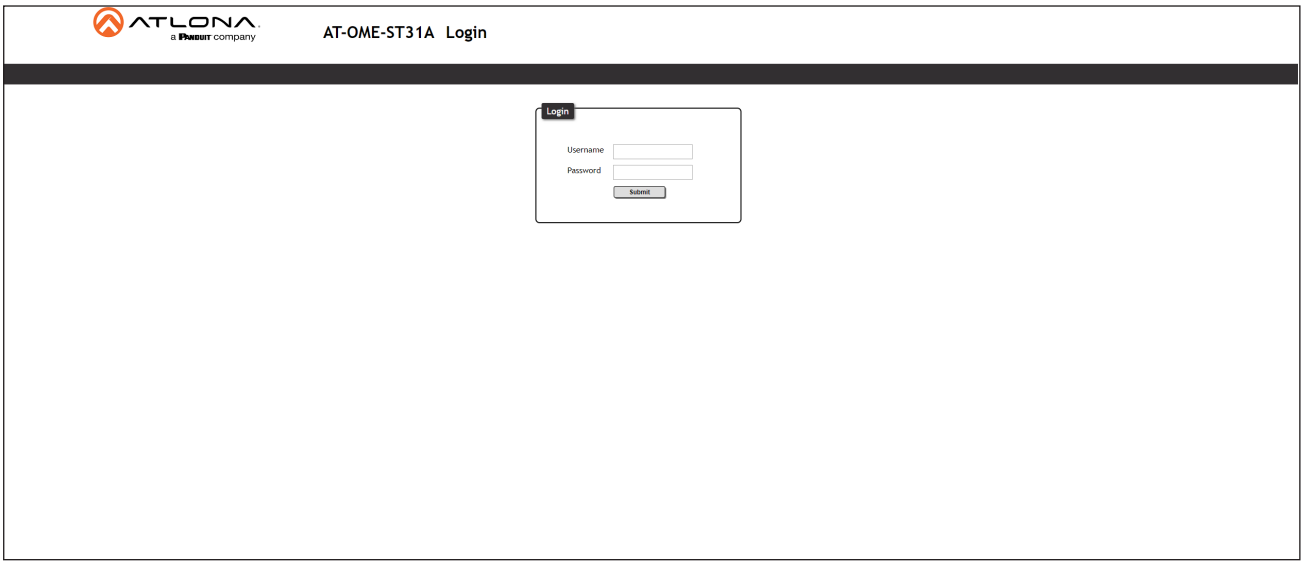
- Input Auto-Switching
- Display Control
- Control Mode

Input Auto Switching

The AT-OME-ST31A provides auto-switching capability. By default, this feature will automatically switch the input to the most recently-connected or powered source when a source is disconnected. For example, if the connection sequence is **HDMI 2** > **USB-C** > **HDMI 1**, and a source is disconnected from the **USB-C** port, then the AT-OME-ST31A will automatically switch to the **HDMI 1** port (the last-connected port). The fallback port can also be customized to switch to any of the available inputs.

Auto-switching is enabled (On), by default, and can be enabled or disabled through the built-in web server. Refer to Configuration and Management Interfaces (page 20) for more information if necessary.

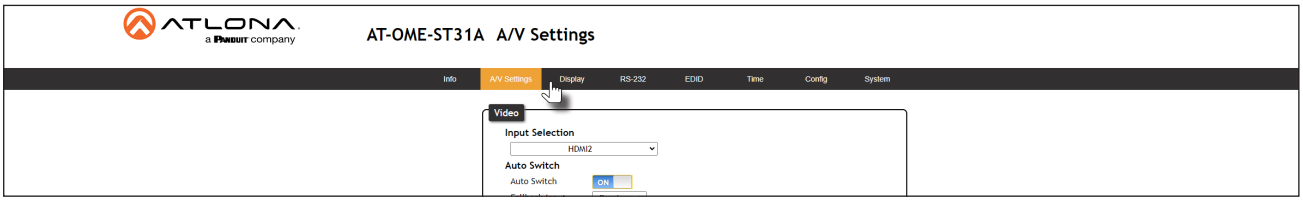
1. Launch a web browser.
2. In the address bar, type the IP address of the AT-OME-ST31A.



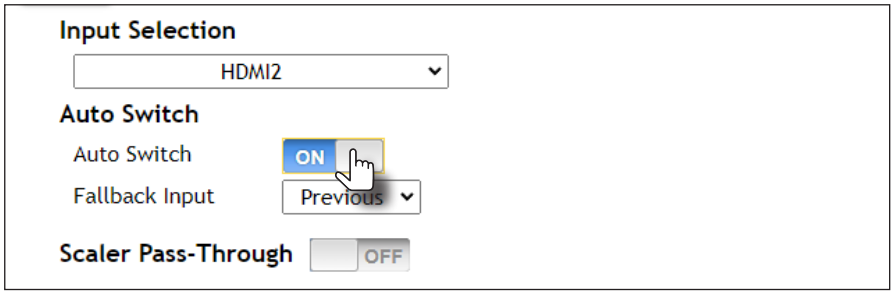
3. Enter the login credentials and click the **Submit** button. The default credentials are listed below:

   Username: admin
   Password: Atlona

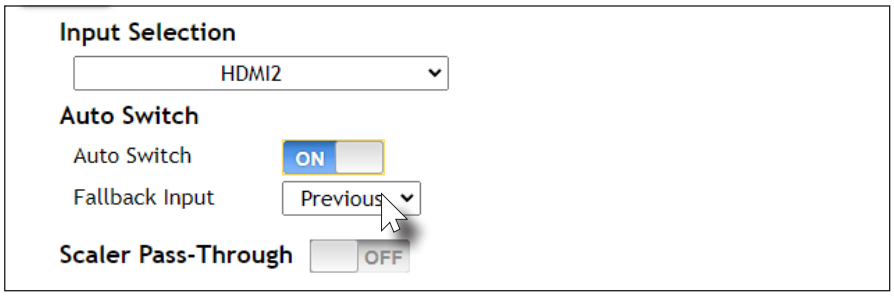
4. Click the **Submit** button or press the [ENTER] key.
5. Click **A/V Settings** in the menu bar. The **A/V Settings** page will be displayed.



6. Click the **Auto Switch** toggle button to enable (ON) or disable (OFF) auto-switching.



7. Click the **Fallback Input** drop-down list to select the desired mode of operation.



Fallback Input	Description
USBC	Automatically switches to USB-C.
HDMI1	Automatically switches to HDMI 1.
HDMI2	Automatically switches to HDMI 2.
Previous (default setting)	The switcher will return to the previous (last connected) input. If no input is found, then it will attempt to switch to a ternary port.

8. Configuration is complete. Changes are automatically saved.

NOTE: The AT-OME-ST31A retains the currently selected input, even after the unit is powered-off then powered-on.

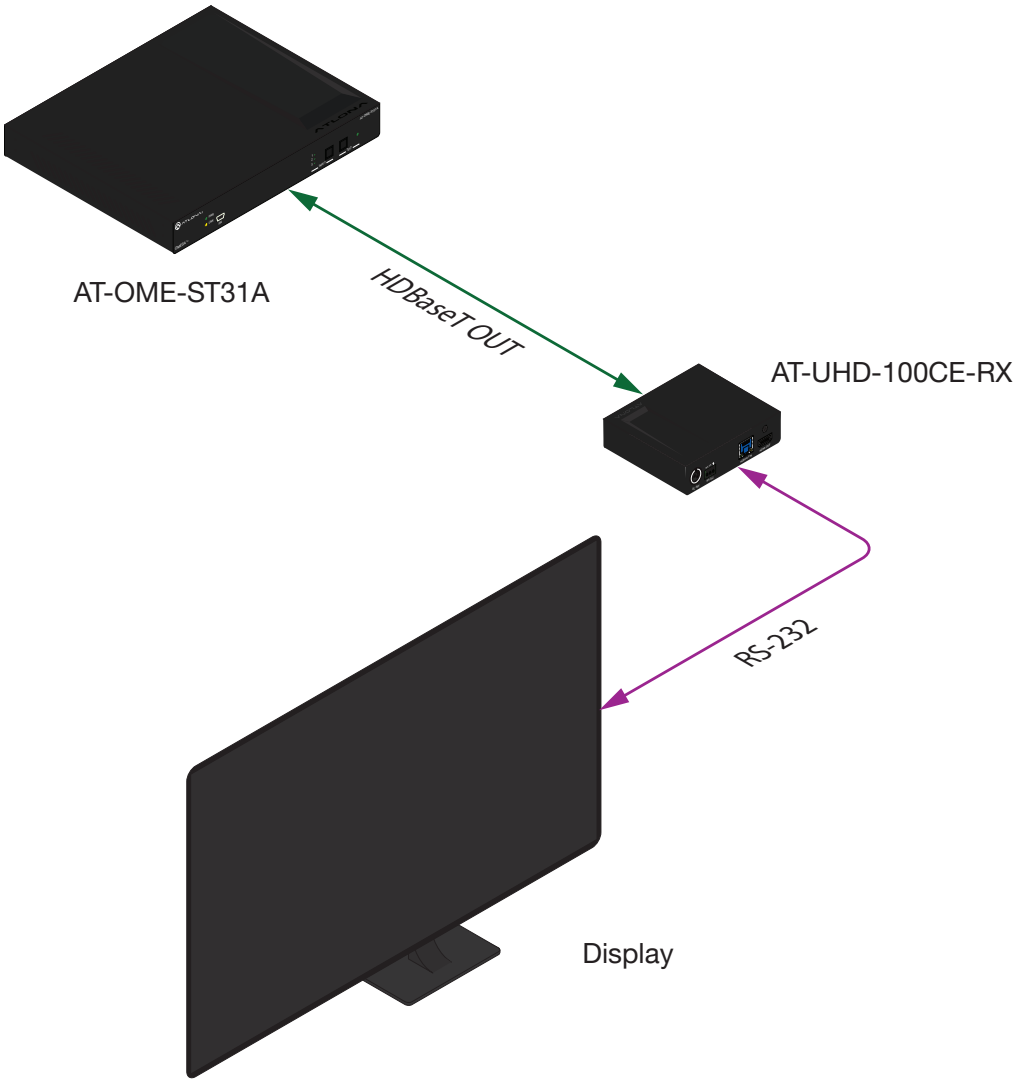
Display Control

The AT-OME-ST31A provides both a **LAN** and **HDBaseT** port for passing RS-232 commands to a display device. No external control system is required. The **DISPLAY** button can also be programmed to toggle power on the display, allowing for convenient control of the display device from the location of the source.

RS-232 over HDBaseT

In this mode, RS-232 commands are sent from the AT-OME-ST31A, over HDBaseT, to the receiver unit, and then to the display (sink) device.

1. Connect the RS-232 cable between the control system and the AT-OME-ST31A.
2. Connect an Ethernet cable from the desired **HDBaseT OUT** port to a receiver.
3. Connect an RS-232 cable between the display (sink) and the receiver.

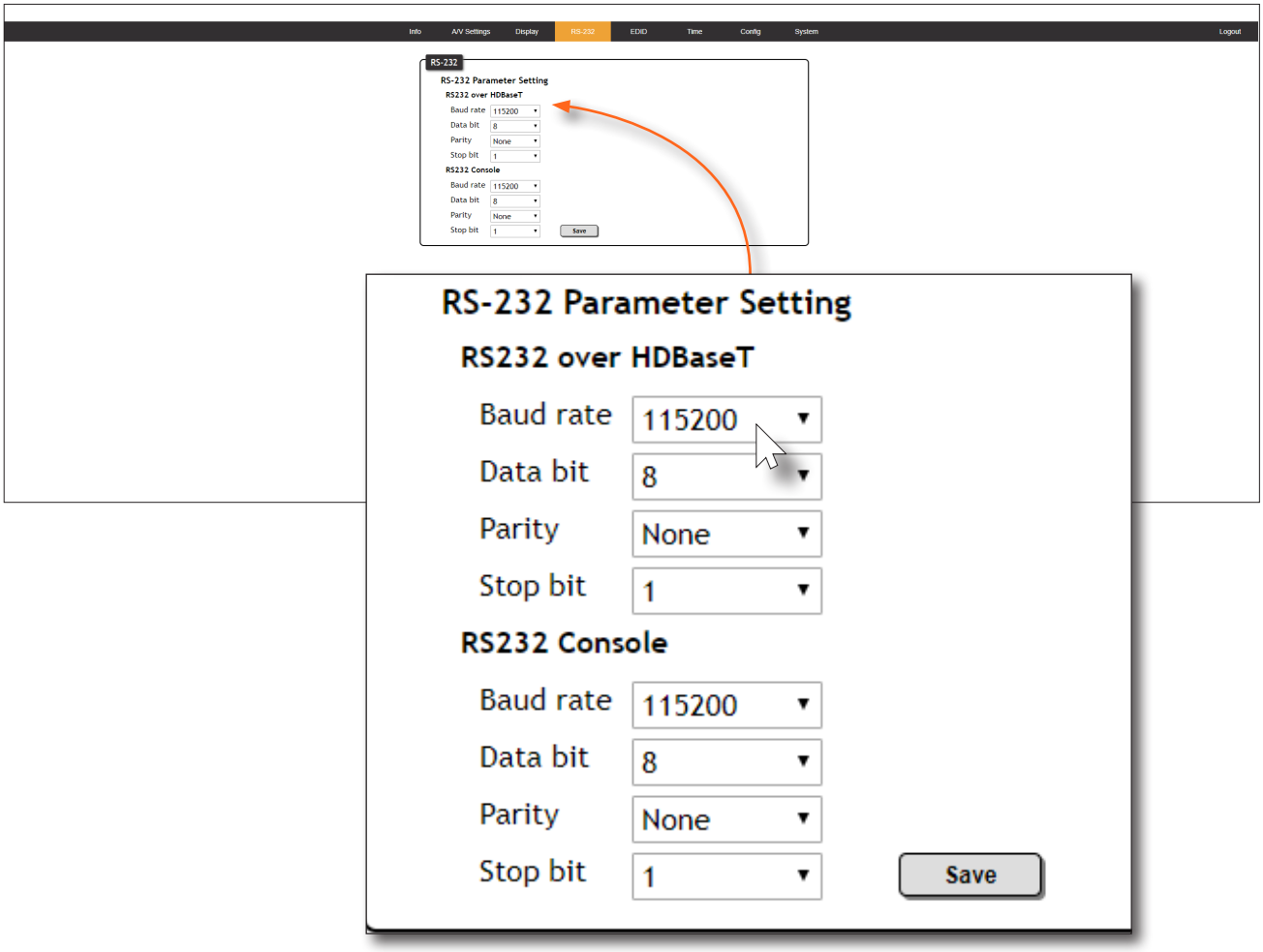


4. Launch a web browser and login to the web server. Refer to Introduction to the Web Server (page 20) for more information. The factory-default username and password are listed below:

   Username: **admin**
   Password: **Atlona**

5. Click **RS-232** in the menu bar.

6. Select the proper baud rate, data bit, parity, and stop bit settings for the **HDBaseT OUTPUT** port. These settings must correspond with the RS-232 settings of the display (sink) device.



7. Click the **Save** button to commit changes.

8. Use the following command to send a command to the display (sink) device, where display_command is the command data to send:

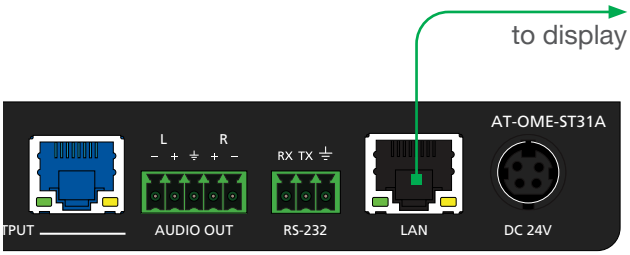
   RS232Zone4[display_command$0d]

   $0d (carriage return) should only be added to end of the string if the sink device is expecting this character.

IP Control

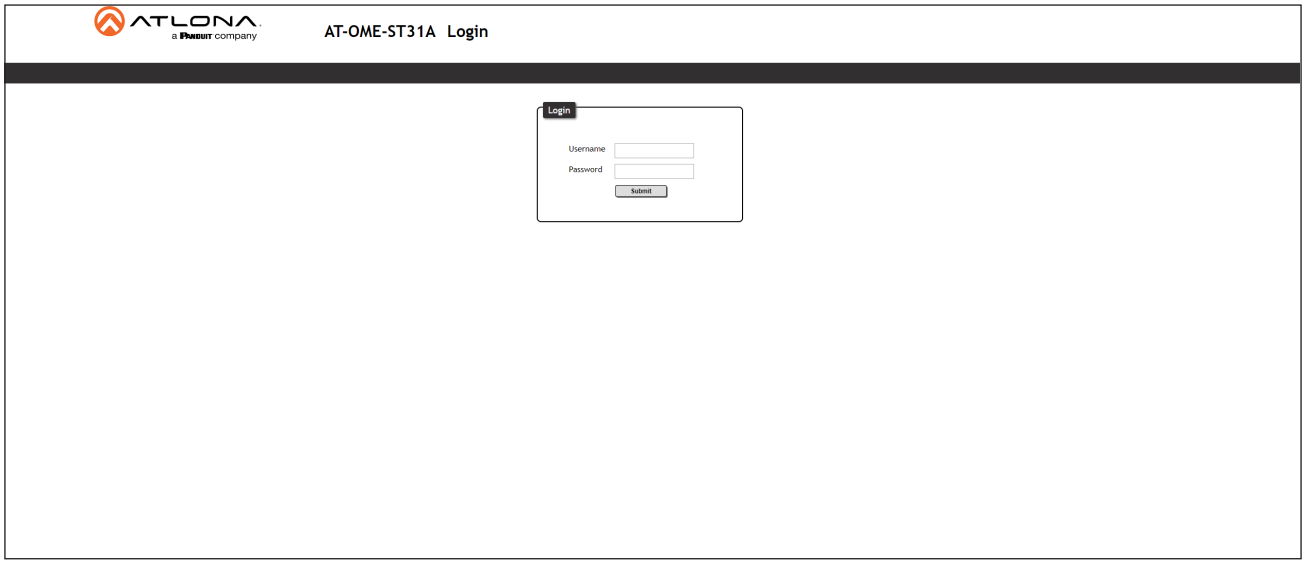
Instead of using a HDBaseT to send commands, this method uses an Ethernet cable to send commands from the AT-OME-ST31A to the display device.

1. Connect an Ethernet cable from the **LAN** port on the AT-OME-ST31A, to the LAN port on the display.

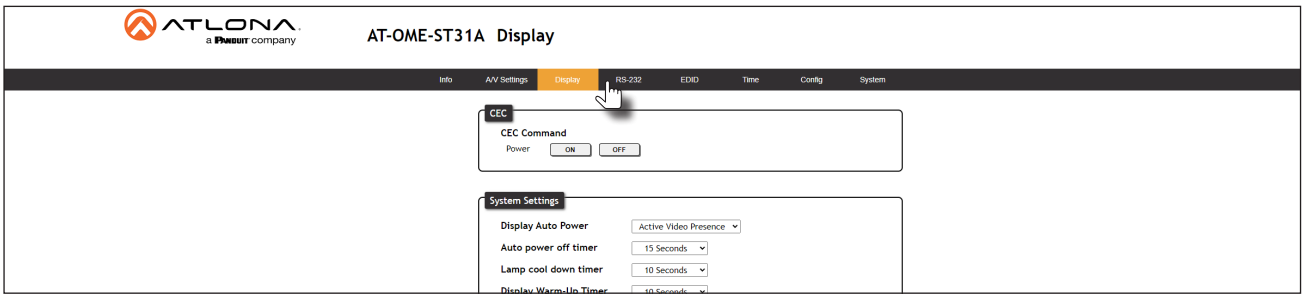


2. Launch a web browser.
3. In the address bar, type the IP address of the AT-OME-ST31A.
4. The **Login** page will be displayed. Enter the required credentials. The default credentials are shown below:

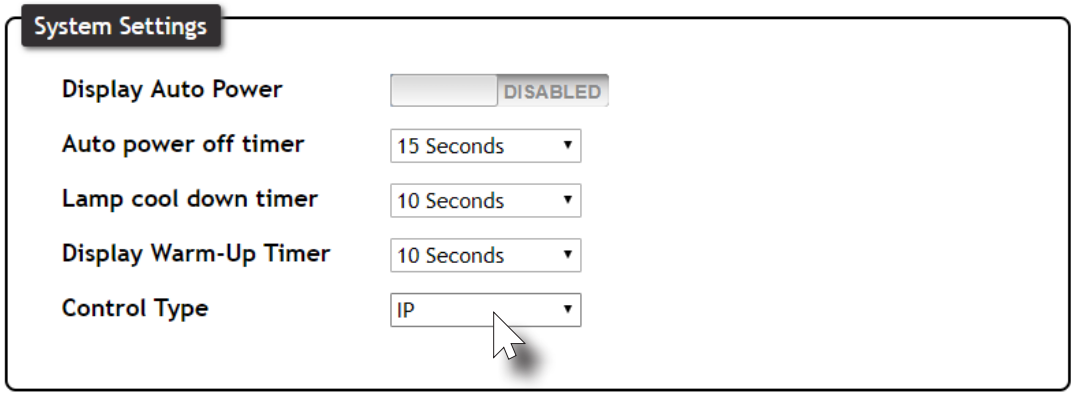
   Username: admin
   Password: Atlona



5. Click the **Submit** button or press the [ENTER] key on the keyboard.
6. Click **Display** in the menu bar. The **Display** page will be shown.



7. Under **System Settings**, click the **Control Type** drop-down list and select **IP**.



8. Locate the **TCP/IP Settings of Controlled Device** section and enter the following information:

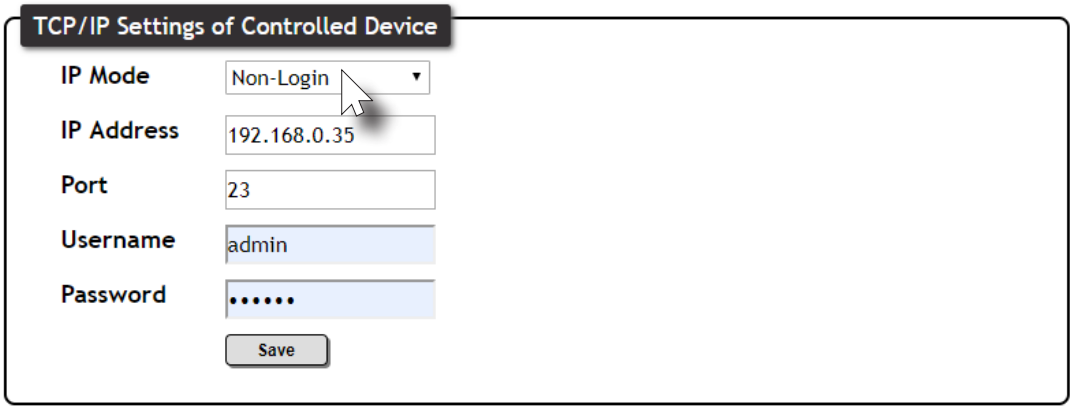
   a. **IP Mode**
   If the device does not require a login, then set this drop-down value to Non-Login. If the device requires login credentials, then select Login from the drop-down list. Note that if Login is selected, then the Username and Password fields will need to be populated with the required login credentials.

   b. **IP Address**
   Enter the IP address of the device to be controlled.

   c. **Port**
   Enter the port number for the device in this field.

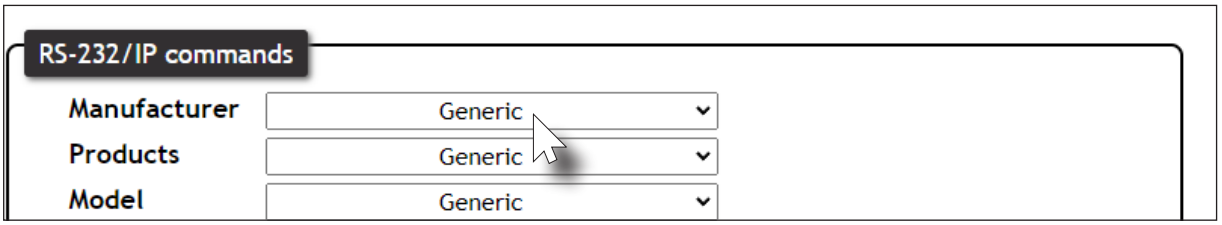
   d. **Username**
   This field is only required if IP Mode is set to Login. Enter the username login credential in this field.

   e. **Password**
   This field is only required if IP Mode is set to Login. Enter the username login credential in this field.



9. Scroll down to the bottom of the page and locate the RS-232 / IP commands section.

10. Click the Manufacturer drop-down list to select the manufacturer of the device that is being controlled.



11. Continue fine-tuning the device selection by clicking the **Products** and **Model** drop-down lists. Once all fields have been set to the proper values, the AT-OME-ST31A will populate the command fields with the proper values, based on the selected device.

NOTE: If the manufacturer/model is not listed in the drop-down lists, then the command fields can be entered manually. Consult the User Manual for the display/sink device to obtain the correct command format.

12. Click the **Send** button to test each command.

HEX Command Strings

a. Enter the hexadecimal command string is the correct field. An example *power-on* command for a display might be:

\xBE\xEF\x03\x06\x00\xBA\xD2\x01\x00\x00\x60\x01\x00\x0D

This command would be entered under the **Set command** field, under **ON**. Consult the documentation for the display for the correct command strings.

b. Make sure the command string is terminated correctly. In most cases, a CR (carriage return) should be specified. In the example above, "\x0D" is the hexadecimal value for a carriage return.

ASCII Command Strings

a. Enter the ASCII command string is the correct field. An example *power-on* command for a display might be:

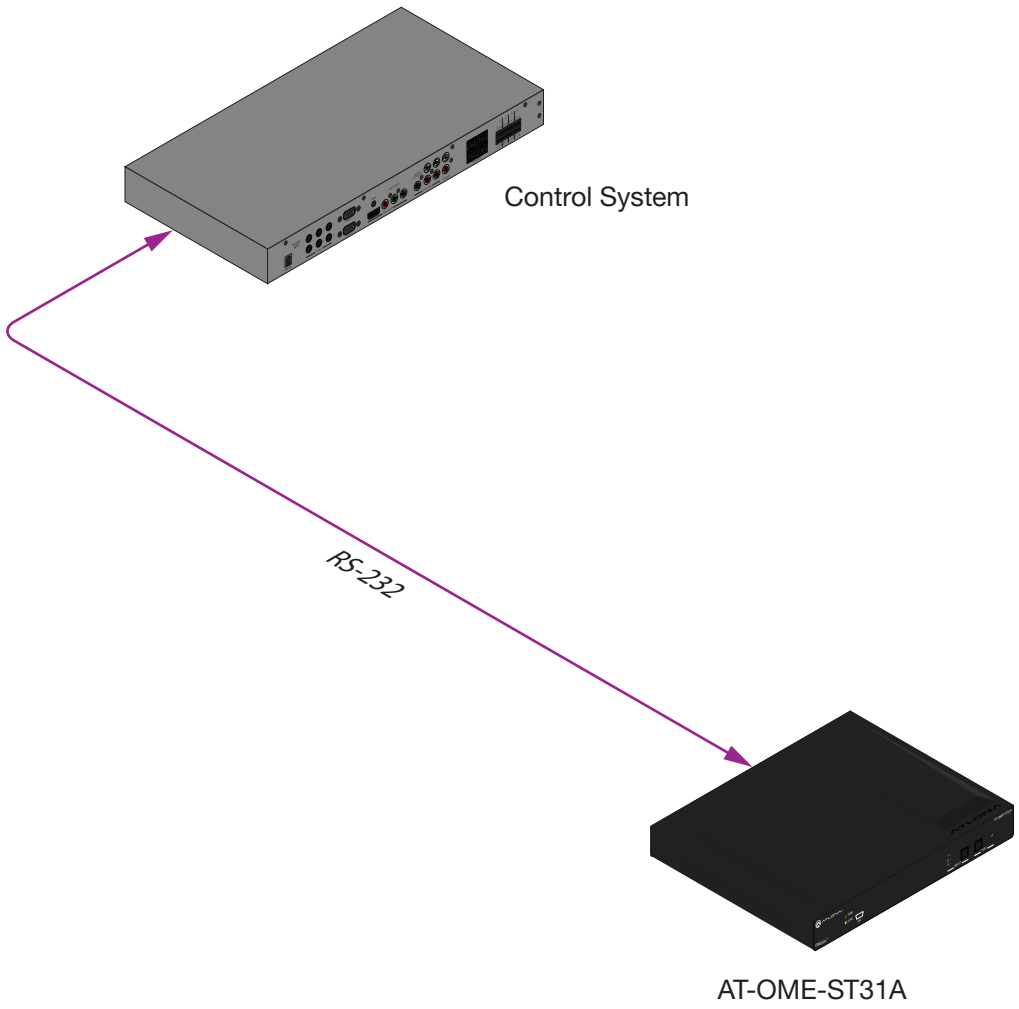
PWON

This command would be entered under the **Set command** field, under **ON**. Consult the documentation for the display for the correct command strings.

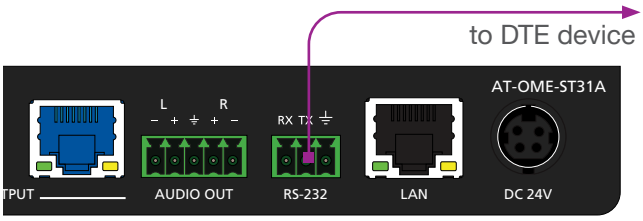
13. Click the **Save** button to commit all changes.

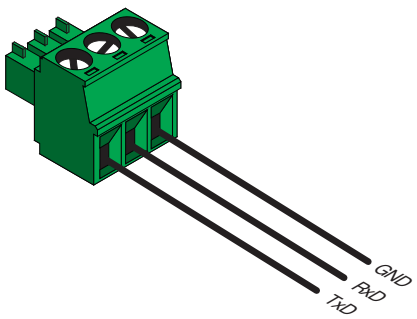
Local RS-232 Control

In this mode, RS-232 commands are sent from a computer or control system (DTE) to the AT-OME-ST31A (DCE). This method allows direct control of the AT-OME-ST31A for routing, IP configuration, powering-on / powering-off and other functions.



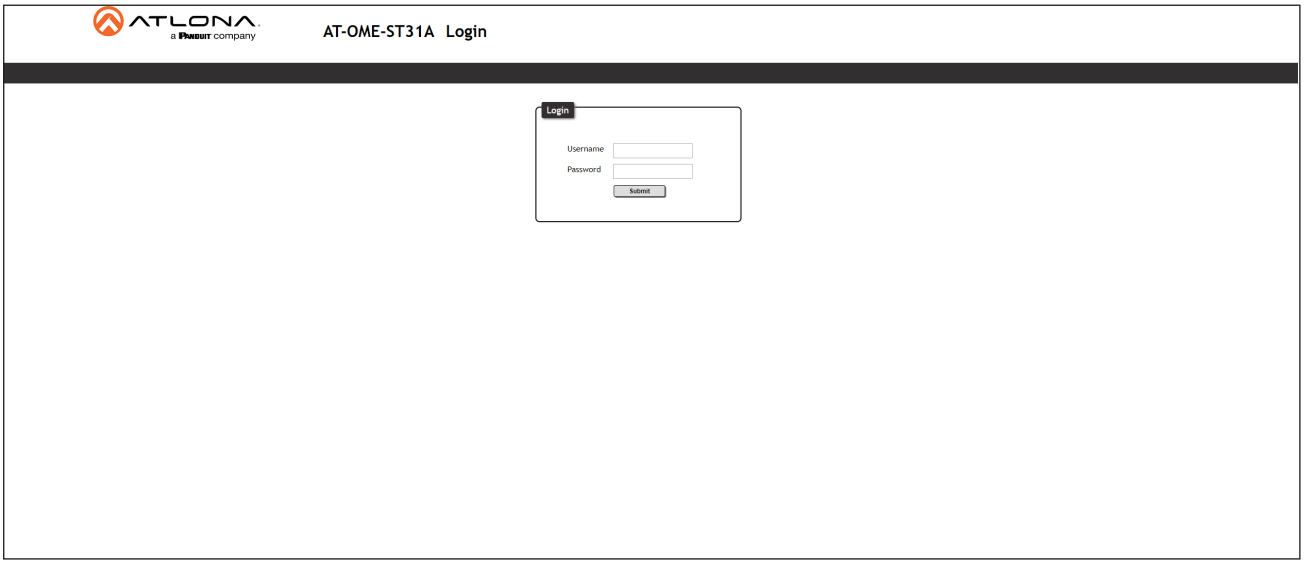
1. Connect a serial cable from the **RS-232** port on the AT-OME-ST31A to the RS-232 port on the control system. The included 3-pin captive screw connector should be wired as shown.



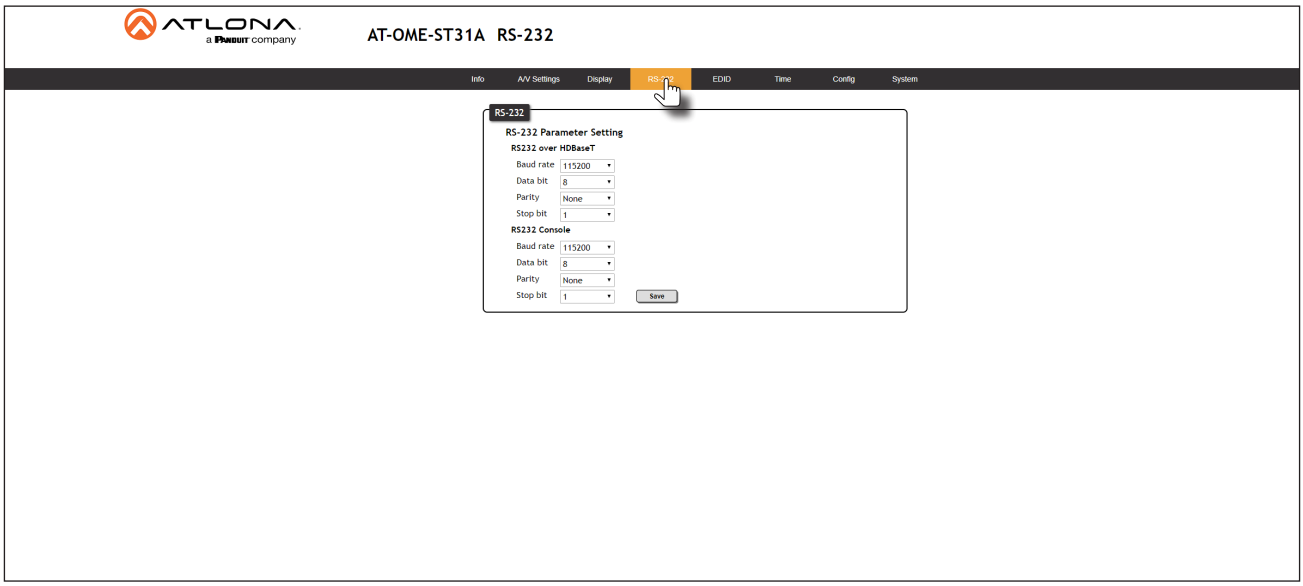


2. Launch a web browser.
3. In the address bar, type the IP address of the AT-OME-ST31A.
4. The **Login** page will be displayed. Enter the required credentials. The default credentials are shown below:

   Username: admin
   Password: Atlona

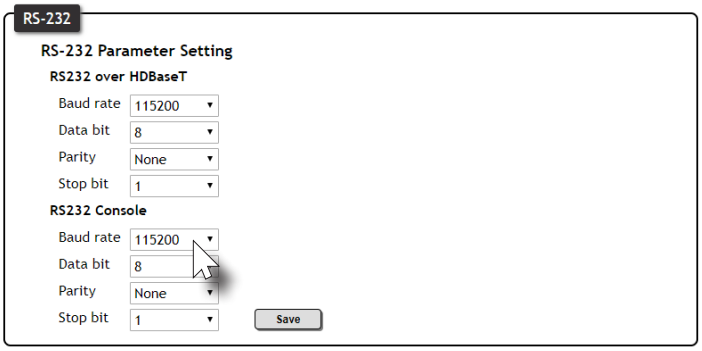


5. Click the **Submit** button or press the [ENTER] key on the keyboard.
6. Click **RS-232** in the menu bar. The **RS-232** page will be shown.



7. Set the control system RS-232 settings, under the **RS232 Console** section. The default baud rate of the AT-OME-ST31A is 115200. If the control system does not support this baud rate, then it can be changed under **RS232 Console** section.

NOTE: The control unit must be set to the same baud rate as the AT-OME-ST31A, in order to communicate.



8. Click the **Save** button to commit changes.
9. Refer to the *Applications Programming Interface* for a listing of available commands.

Appendix

Updating the Firmware

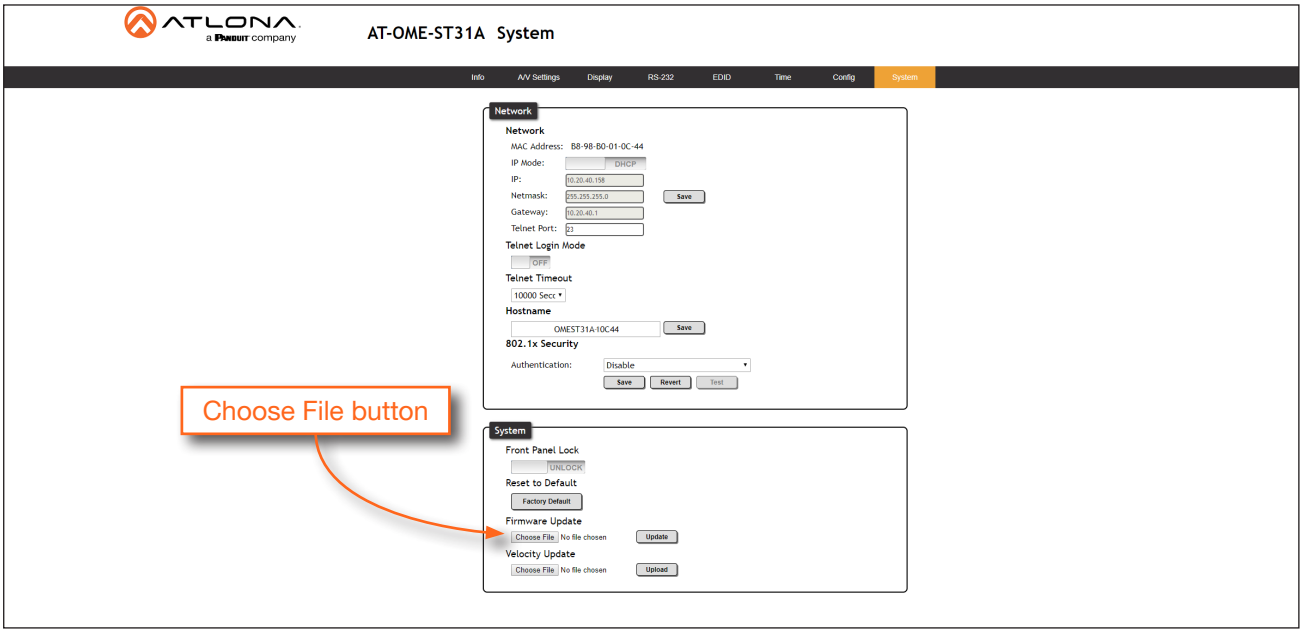
Updating the firmware can be completed using either the USB interface or the web server. Atlona recommends using the web server for updating the firmware. However, if a network connection is not available, the AT-OME-ST31A firmware can be updated using a USB-A to USB mini-B cable.

Using the Web Server

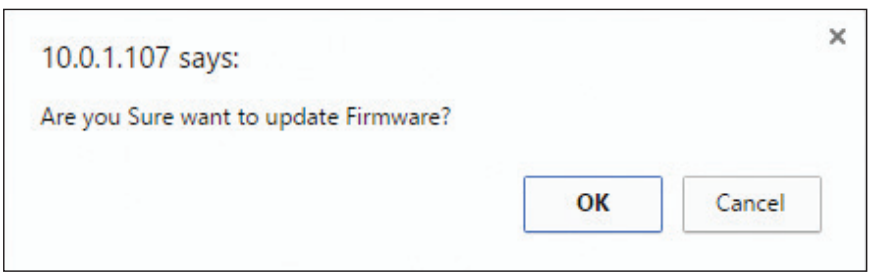
Requirements:

- AT-OME-ST31A
- Firmware file
- Computer running Microsoft Windows

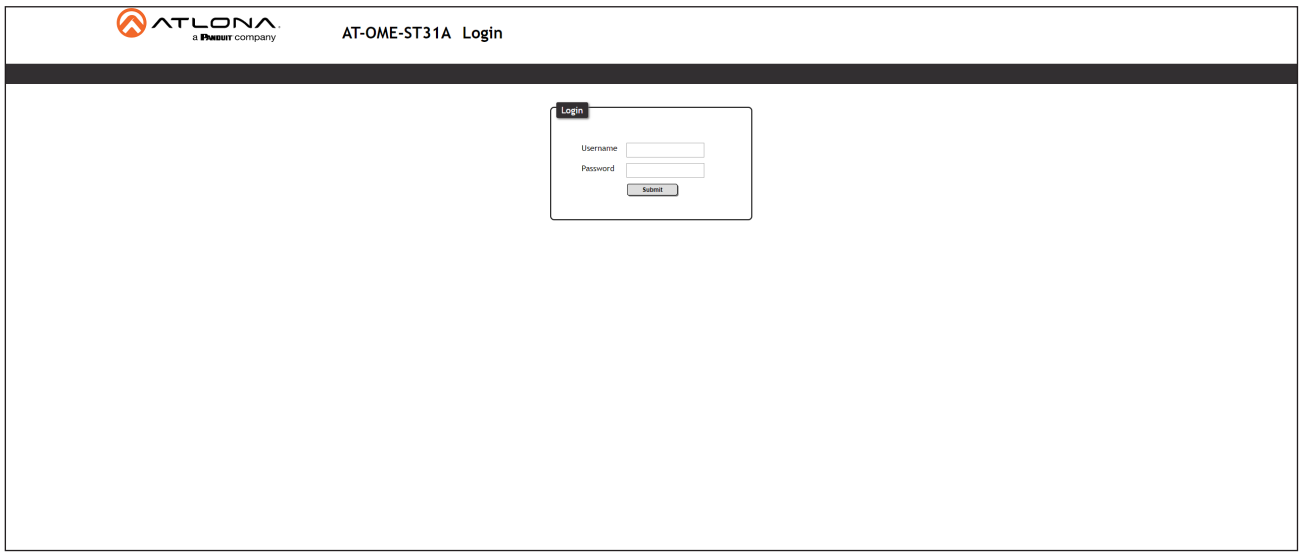
1. Connect an Ethernet cable from the computer, containing the firmware, to the same network where the AT-OME-ST31A is connected.
2. Go to the System Page (page 32) in the web server.



3. Click the **Choose File** button, under the **Firmware Update** section.
4. Browse to the location of the firmware file, select it, and click the **Open** button.
5. Click the **Update** button, under the **Firmware Update** section.
6. The following message box will be displayed.



7. Click the **OK** button to begin the firmware update process. Click the **Cancel** button to cancel the process.
8. After the firmware update process is complete, the **Login** screen will be displayed.

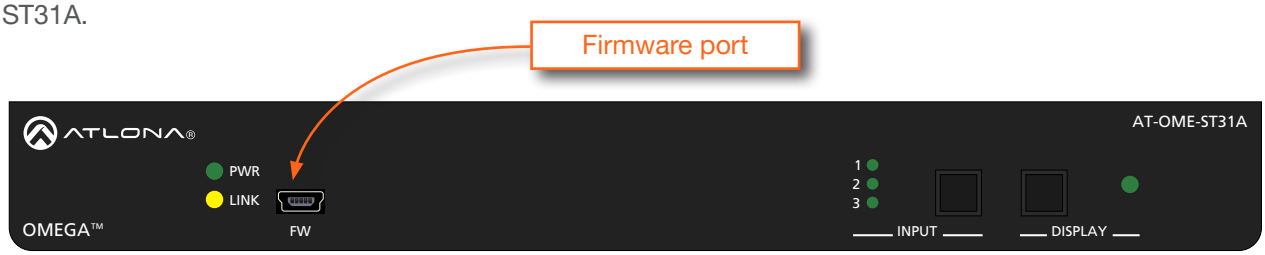


Using USB

Requirements:

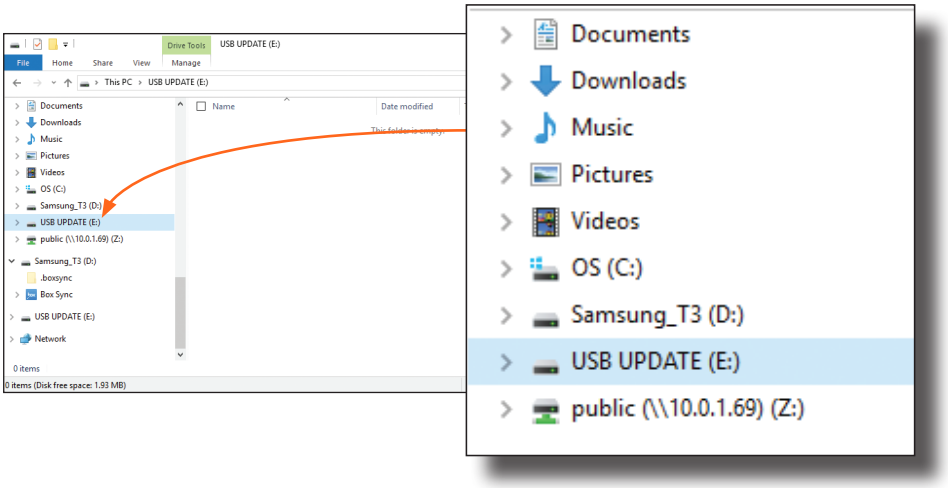
- AT-OME-ST31A
- Firmware file
- Computer running Windows
- USB-A to USB mini-B cable

1. Power-on the AT-OME-ST31A.
2. Connect a USB-A to USB mini-B cable to the PC that contains the firmware file.
3. Press and hold the **INPUT** button while connecting the USB cable from the PC, to the **FW** port on the AT-OME-ST31A.



4. Release the **INPUT** button.
5. The USB UPDATE folder will be displayed.

   If this folder is not displayed, automatically, select the USB UPDATE drive from Windows Explorer.



6. Delete all files from the USB UPDATE drive, if any are present, then drag-and-drop the firmware file to the drive.
7. After the file has been copied, disconnect the USB cable from both the computer and the AT-OME-ST31A.
8. The firmware update process is complete.

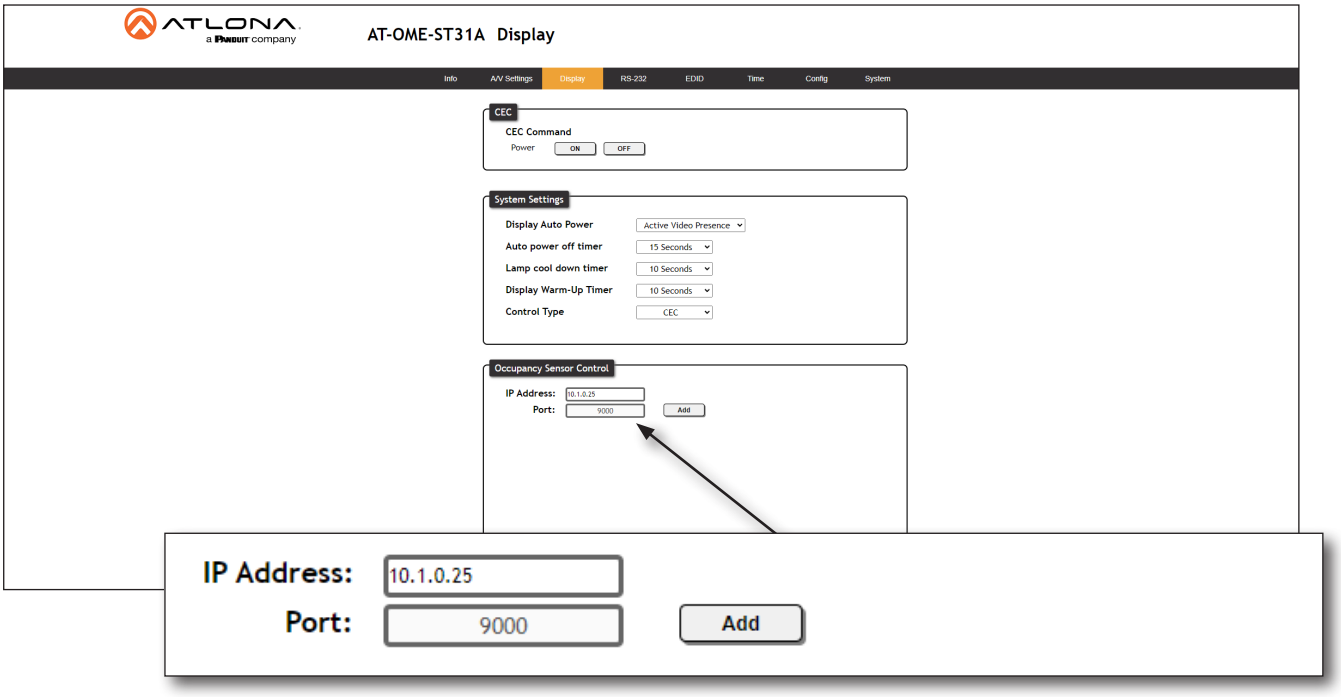
Integration with the AT-OCS-900N

NOTE: Both the AT-OME-ST31A supports a maximum of three AT-OCS-900N devices.

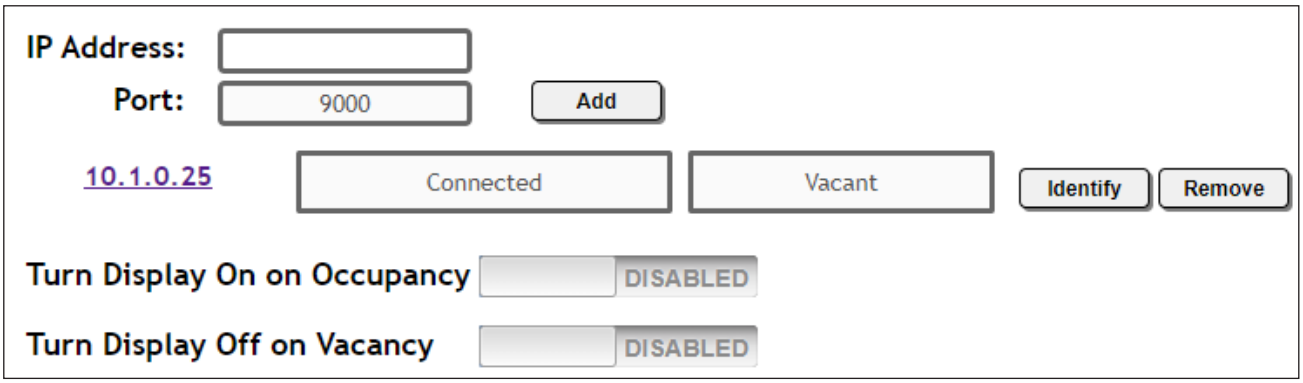
The following provides instructions on adding the AT-OCS-900N occupancy sensor as a device. The **Auto Switch** feature on the AT-OME-ST31A does not need to be enabled for this to work.

IMPORTANT: A username and password must be configured on the AT-OCS-900N before using the device with the AT-OME-ST31A.

1. Connect the AT-OCS-900N to the same network as the AT-OME-ST31A / AT-OME-ST31A-CP. Refer to the AT-OCS-900N User Manual for more information.
2. Login to the web server of the AT-OME-ST31A.
3. Click **Display** in the top menu bar.
4. Under the **Occupancy Sensor Control** section, enter the IP address of the AT-OCS-900N in the **IP Address** field.



5. Click the **Add** button. If the correct IP address was entered and the AT-OCS-900N is found, additional information will be displayed under the Occupancy Sensor Control section, as shown on the next page.



6. Click the **Turn Display On on Occupancy** toggle to enable or disable this feature. When enabled, the toggle switch will display as **ENABLED** and the occupancy sensor will power-on the display when the room is occupied.
7. Click the **Turn Display Off on Vacancy** toggle to enable or disable this feature. When enabled, the toggle will display as **ENABLED** and the occupancy sensor will power-off the display when the room is no longer occupied.
8. Click the **Identify** button to identify the occupancy sensor. This feature is useful when multiple sensors are connected.

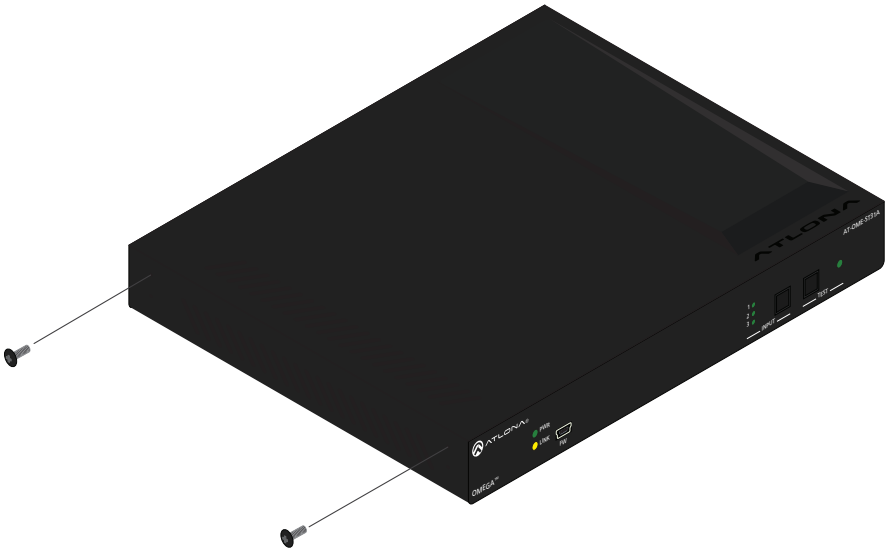
IMPORTANT: When adding an occupancy sensor, it is recommended that a static IP address is assigned to the occupancy sensor. DHCP is not recommended.

9. Click the **Remove** button to delete a sensor from the **Sensors** list.
10. Setup is complete.

Mounting Instructions

The AT-OME-ST31A includes two mounting brackets, which can be used to attach the unit to any flat surface. Use the two enclosure screws, on the sides of the unit to attach the mounting brackets.

1. Using a small Phillips screwdriver, remove the two screws from the left side of the enclosure.



2. Position one of the mounting brackets, as shown below, aligning the holes on the side of the enclosure with one set of holes on the mounting bracket.
3. Use the screws from Step 1 to attach the mounting bracket.

4. Repeat steps 1 and 2 to attach the second mounting bracket to the opposite side of the unit.
5. Mount the unit to a flat surface using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.

Specifications

Video		
Signal	Input - HDMI, USB-C Output - HDMI, HDBaseT	
Copy Protection	HDCP 1.4 / 2.2	
Pixel Clock	600 MHz (300 MHz over HDBaseT)	
UHD/HD/SD	4096x2160 (DCI) @ 60[1]/30/25/24 Hz 3840×2160 (UHD) @ 60[1]/30/25/24 Hz 1080p @ 60/59.9/50/30/29.97/25/24/23.98 Hz 1080i @ 60/59.94/50 Hz 720p @ 60/59.94/50 Hz	720x576p @ 50 Hz 720x576i @ 50 Hz 640x480p @ 60/59.96 Hz 640x480i @ 60 Hz
VESA All resolutions are 60Hz	2560×1600 @ 60 Hz 2048×1536 @ 60 Hz 1920×1200 @ 60 Hz 1680×1050 @ 60 Hz 1600×1200 @ 60 Hz 1440×900 @ 60 Hz 1400×1050 @ 60 Hz 1280×1024 @ 60 Hz	1280×800 @ 60 Hz 1366×768 @ 60 Hz 1360×768 @ 60 Hz 1152×864 @ 60 Hz 1024×768 @ 60 Hz 800×600 @ 60 Hz 640×480 @ 60 Hz
Scaler (HDMI Output)[2]	IN	OUT
	4K@24 Hz 4K@30 Hz 4K@60 Hz	1080p@24 Hz 1080p@30 Hz 1080p@60 Hz
Scaler Pass-Through (HDMI Output)	4K @ 60 Hz	4K @ 60 Hz
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™ @ 60Hz; HDMI and USB-C ports only	

Audio			
HDMI Pass-Through Formats	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD	DTS® Digital Surround™ DTS-HD Master Audio™
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		
Bit Rate	24 Mbits/s max		
Analog Audio			
Format	2-channel stereo		
Balanced Output	+4 dBu, nominal gain; +20 dBu headroom		
Frequency Response	20 Hz to 20 kHz, ±0.5 dB		
THD + N	< 0.004% @ 20 Hz to 20 kHz		
SNR	> 105 dB @ 1 kHz, zero clipping @ 0 dBFS, unweighted		

Appendix

Protocols	
Supported	HTTP, Telnet
Addressing	DHCP, static
Authentication	IEEE 802.1x: PEAP/MSCHAPv2 or EAP-TLS

Control	
RS-232	Device control and configuration; supports baud rates from 2400 to 115200
IP	Device control and configuration
CEC	Device control and configuration

Connectors	
HDMI IN	2 - Type A, 19-pin female
HDMI OUT	1 - Type A, 19-pin female
USB-C	1 - USB Type-C, 24-pin female
HDBaseT OUT	1 - RJ45
LAN	1 - RJ45, 10/100/1000 Mbps
RS-232	1 - 3-pin captive screw (bidirectional)
AUDIO OUT	1 - 5-pin captive screw, balanced/unbalanced, 2-channel
DC 24V	1 - 4-pin, locking

USB	
USB-C Device Charging Capability	60 W @ 20 V / 3 A, 36 W @ 12 V / 3 A, and 15 W @ 5 V / 3 A

Controls and Indicators	
INPUT, DISPLAY	2 - momentary, tact-type
IP MODE, RESET	2 - momentary, tact-type, recessed
PWR indicator	1 - LED, green
LINK indicator	1 - LED, yellow
INPUT indicators: 1, 2, 3	3 - LED, green

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e	295	90	330	100
CAT6/6a/7	330	100	330	100

Power	
Consumption	101.5 W (with USB charging) 24.2 W (without USB charging)
External Power Supply (optional)	Input: 110 - 220 V AC, 50/60 Hz Output: 24 V DC, 3 A

Environmental	
Operating Temperature	+32 to +113 °F 0 to +45 °C
Storage Temperature	-4 to +140 °F -20 to +60 °C
Operating Humidity (RH)	20% to 95%, non-condensing

Dimensions (H x W x D)	Inches	Millimeters
Device	1.02 x 8.62 x 5.98	26 x 219 x 152
Power Supply (AT-PS-245-D4)	1.6 x 2.6 x 6.2	40.6 x 66 x 157.4

Weight	Pounds	Kilograms
Device	1.95	0.88

Certification		
Device	CE, FCC, RoHS	
Power Supply	FCC, RCM, cULus, CE, RoHS	

Compliance	
NDAA-899	Yes

Warranty	
3 years	View the full warranty information here: https://atlona.com/warranty

(1) USB-C port supports AV and device charging (with optional AT-PS-245-D4 power supply), but not USB host data.
(2) Scaler does not support frame rate conversion.