4K/UHD Five-Input Universal Switcher with Wireless Presentation Link

AT-UHD-SW-510W



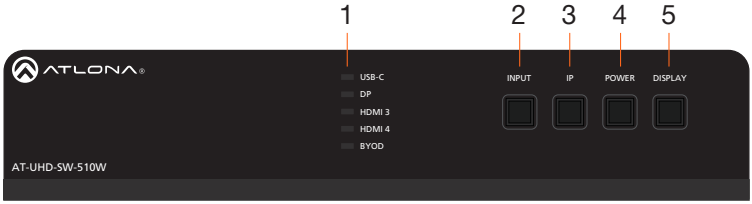
The Atlona AT-UHD-SW-510W is a 5×1 multi-format switcher with wireless presentation capability. It provides universal BYOD (bring your own device) compatibility with HDMI, DisplayPort, and USB-C inputs, plus wireless connectivity for mobile devices. The SW-510W is HDCP 2.2 compliant, and features an HDMI output and a mirrored HDBaseT™ output that can be used with the Atlona AT-UHD-EX-100CE-RX-PSE HDBaseT receiver. It also includes automatic input switching and automatic display control capability, both applicable to wired and wireless source connections. Additionally, the SW-510W can be integrated with an occupancy sensor to automatically power up the unit and display (available in firmware 1.1 or greater). This unique multi-format switcher and wireless gateway provides a universal connectivity solution for presentation devices in a wide range of professional AV applications.

Package Contents

1 x AT-UHD-SW-510W
1 x Captive screw connector, 5-pin
1 x Captive screw connector, 4-pin
2 x Captive screw connector, 3-pin
2 x Wi-Fi antenna modules
1 x USB-C cable, 2 meters
1 x 24 V DC power supply
2 x Mounting plates
4 x Mounting screws
1 x Installation Guide

IMPORTANT: Visit http://www.atlona.com/product/AT-UHD-SW-510W for the latest firmware updates and User Manual.

Panel Descriptions



Front

1 **Input Indicators**
Displays the currently selected input.

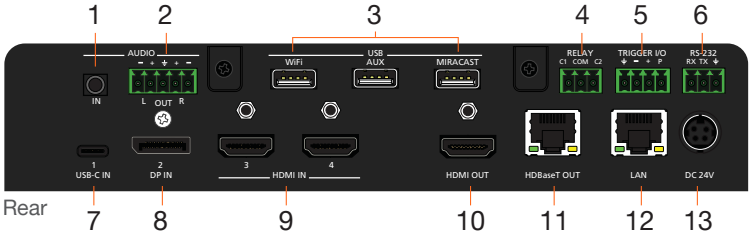
2 **INPUT**
Press this button to cycle through each input. This button is also used to toggle the IP mode. Refer to page 10, for details.

3 **IP**
Press this button to display the IP address of the AT-UHD-SW-510W on the connected display.

4 **POWER**
Press and hold this button for five seconds to power-off the AT-UHD-SW-510W. To power-on the unit, disconnect and reconnect the power cord on the rear panel.

5 **DISPLAY**
Press this button to toggle the power state of the display or can be used to reset the unit. Refer to page 8, for details.

Panel Descriptions



1 **AUDIO IN**
Connect a 3.5 mm mini-stereo cable from an analog audio source to this connector.

2 **AUDIO OUT**
Use the included captive screw connector to connect a balanced audio device.

3 **USB**
Connect the included Wi-Fi antenna to these ports. The **AUX** port is reserved. Refer to Installation on page 9 for more information.

4 **RELAY**
Connect one of the included 3-pin captive screw connectors to this port to control screens, drapes, lights, or other devices.

5 **TRIGGER I/O**
Connect voltage-controlled device to this port. A 4-pin captive screw connector is required.

6 **RS-232**
Use the included captive screw connector to connect an RS-232 controller or automation system.

7 **USB-C**
Connect a USB-C cable from this port to a USB-C source.

8 **DP IN**
Connect a DisplayPort device to this port.

9 **HDMI IN**
Connect an HDMI cable from each of these ports to a UHD/HD source.

10 **HDMI OUT**
Connect an HDMI cable from this port to an HD/UHD display.

11 **HDBaseT OUT**
Connect to a locally powered HDBaseT receiver such as the AT-UHD-EX-100CE-RX-PSE.

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

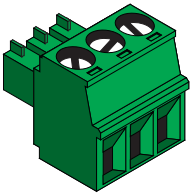
13 **DC 24V**
Connect the included power supply to this power receptacle.

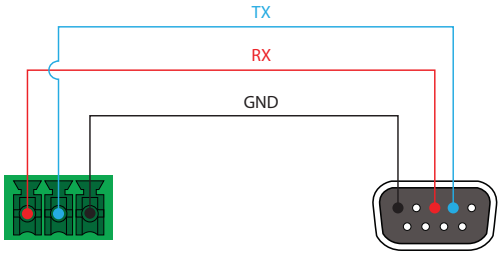
RS-232

The AT-UHD-SW-510W provides an **RS-232** port which allows communication between an automation system and an RS-232 device. This step is optional.

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation of the RX, TX, and GND wires.
3. Insert the TX, RX, and GND wires into correct terminal using one of the included 3-pin captive screw connectors.

NOTE: Typical DB9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices functions of pins 2 and 3 are reversed.

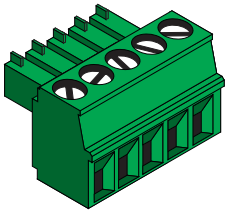


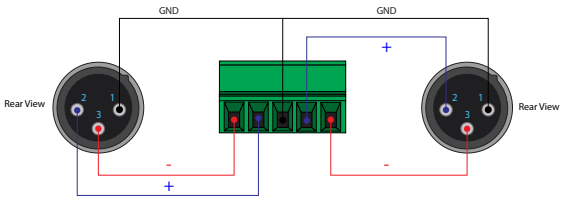


Audio

The AT-UHD-SW-510W provides the ability to output two-channel balanced analog audio on the **AUDIO OUT** port, using the included 5-pin captive screw connector. This step is optional.

Use wire strippers to remove enough insulation to allow each wire to be securely fastened to each terminal of the captive screw connector block and connect the wires as shown. Unbalanced audio is not supported.



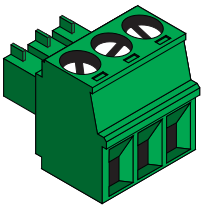


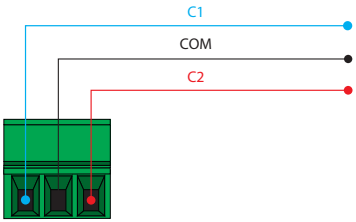
Balanced XLR audio

Relay

The AT-UHD-SW-510W provides a **RELAY** port, allowing the control of screens, curtains, and other devices. Use a 48 V DC relay with no more than 1 A current draw.

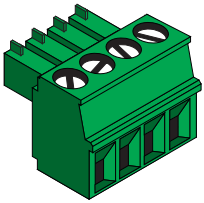
When the AT-UHD-SW-510W is powered-on or rebooted, **C1** and **C2** are set to the Normally Open (NO) state.

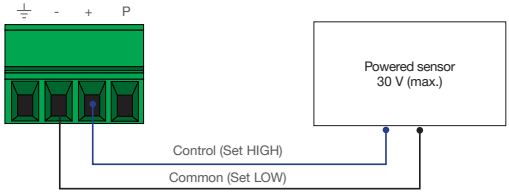




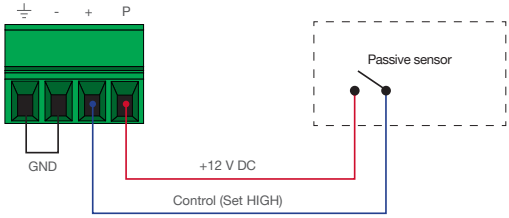
Trigger

The **TRIGGER I/O** port allows voltage-controlled devices, such as an occupancy sensor, to be connected to the AT-UHD-SW-510W. Use the included 4-pin captive screw connector to connect the device. Voltage range is 3 to 30 V DC.





Powered sensor



Passive sensor

Mounting Instructions

The AT-UHD-SW-510W can be mounted in different ways, based on the number of units that are being installed. The AT-UHD-SW-510W can be mounted in a rack or on/under any flat surface.

NOTE: AT-UHD-510W-RM rack ears are sold separately. Contact Atlona for more information.

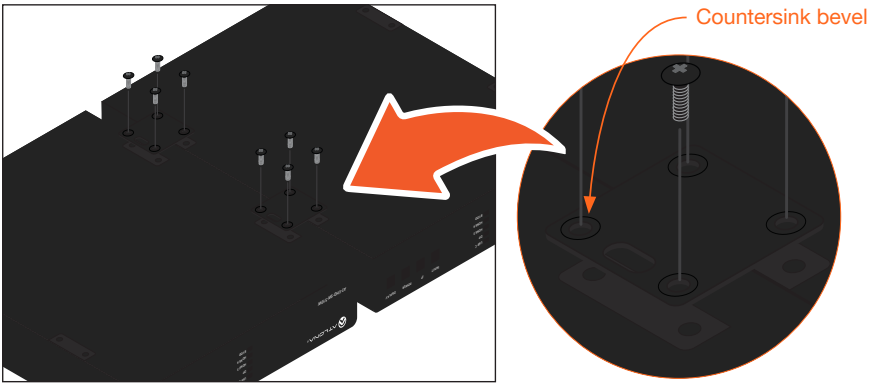
Single-unit rack installation

1. Attach the included small rack ear (sold separately) to one side of the AT-UHD-SW-510W, using the included screws.
2. Attach the included longer rack ear (sold separately) to the opposite side of the AT-UHD-SW-510W using the included screws.

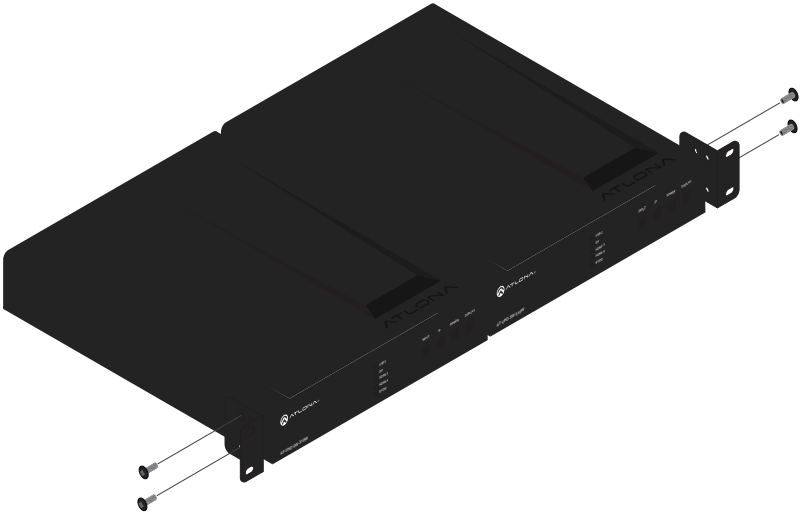


Dual-unit rack installation

1. Turn both units upside-down on a flat surface, next to each other, as shown.
2. Position the included mounting plates over the holes on the bottom of the enclosure. When attaching mounting plates, the countersink bevels on the mounting plate should face upward.

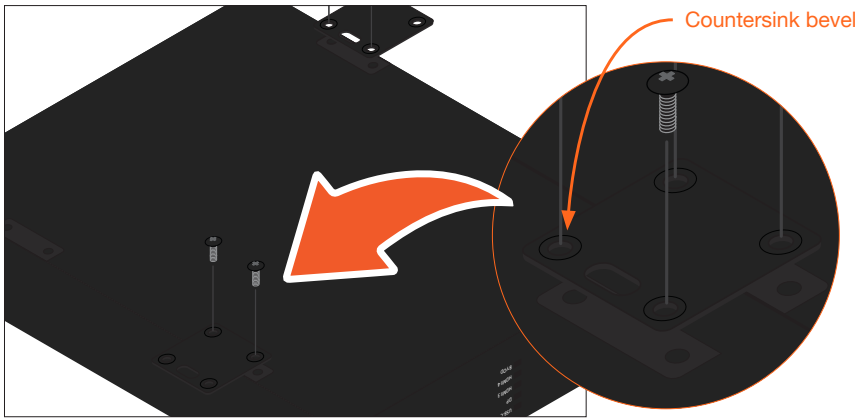


3. Turn the attached units over and install the rack ears (sold separately) to one side of each enclosure using the included screws.



Flat surface

1. Turn the unit upside down on a flat surface.
2. Position the included mounting plates over the pre-drilled holes on the bottom of the enclosure. When attaching mounting plates, the countersink bevels on the mounting plates should face upward.



3. Mount the unit using the circular holes, on each mounting plate. If using a drywall surface, a #6 drywall screw is recommended. Mounting screws are not included.

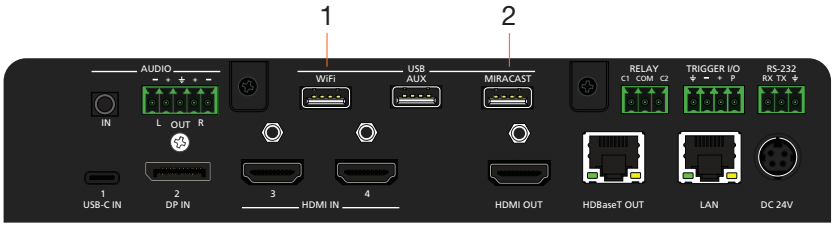


NOTE: The unit can also be mounted under a flat surface, such as a table, by turning the unit upside down.

Installation

1. Connect a USB-C cable from a source to the **USB-C (1)** port.
2. Connect a DisplayPort cable from a source to the **DP IN (2)** port.
3. Connect up to two UHD/HD sources, using HDMI cables, to the **HDMI IN (3)** and **HDMI IN (4)** ports.
4. Connect an HDMI cable from the **HDMI OUT** port to a UHD/HD display.
5. Connect up to two USB wireless antenna modules to the identified **USB (WiFi)** ports, below. Two USB wireless antennas are included. **WiFi** (1) supports Google Cast™ and Apple AirPlay®. The **MIRACAST** port (2) only supports Miracast™. The **AUX** port is reserved for obtaining the IP address of the unit. Refer to Obtaining the IP Address on page 10 for more information.

IMPORTANT: Only use Atlona Wi-Fi USB modules. Other Wi-Fi modules may not be supported by this product.

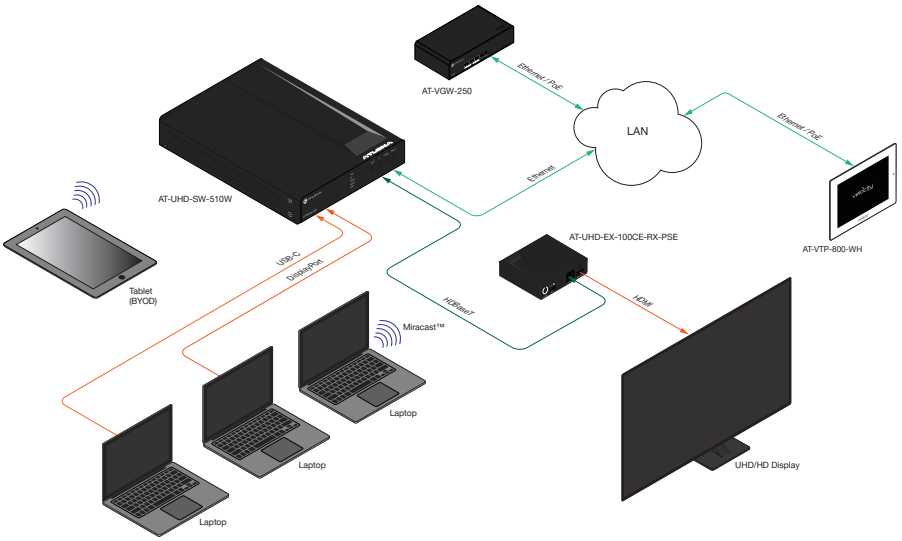


6. Connect the relay leads from the control motors of the projection screen, blinds, or curtains, to the relay outputs to the **RELAY** port, using the included 3-pin captive screw connector. Use a 48 V DC relay with no more than 1 A current draw.
7. Connect a trigger device, such as an occupancy sensor switch, to the **TRIGGER I/O** port. A 4-pin captive screw connector is required. Voltages from 3 to 30 V are supported.
8. Connect a 3.5 mm analog audio cable from an analog source to the **AUDIO IN** port. This audio source can be used to embed analog audio on any of the input sources.
9. Connect an Ethernet cable from the **LAN** port to the Local Area Network (LAN).
10. Connect an Ethernet cable from the **HDBaseT** port to an HDBaseT receiver unit, such as the AT-UHD-EX-100CE-RX-PSE.
11. Connect the included green 5-pin captive screw connector to the **AUDIO OUT** connector.
12. Connect the included power supply to the **DC 24V** connector and connect the power cord to an available electrical outlet.
13. Follow the on-screen instructions to complete the set-up procedure.

Resetting the Factory-Default Settings

Press and hold the **DISPLAY** button for 15 seconds to reset the AT-UHD-SW-510W to factory-default settings. Note that the AT-UHD-SW-510W will be placed in DHCP mode, as part of the reset procedure.

Connection Diagram



IP Configuration

By default, the AT-UHD-SW-510W is set to DHCP mode, allowing a DHCP server (if present) to assign the unit an IP address. If a DHCP server is not found within 15 seconds, then the unit will be placed in Auto IP mode and use a self-assigned IP address within the range of 169.254.xxx.xxx. If DHCP or Auto IP mode are not desired, the unit can be placed into static IP mode by using the **INPUT** button on the front panel.

Switching the IP mode

Press and hold the **INPUT** button for approximately 15 seconds. Release the **INPUT** button. All the front-panel LED indicators will begin to flash, then the unit will reboot. The number of flashes will indicate the currently selected IP mode:

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

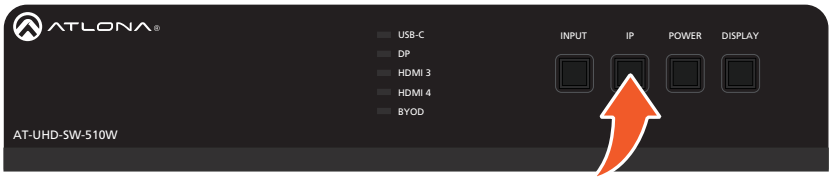
Once the desired IP mode is set, refer to Obtaining the IP Address, on the next page, for information on retrieving the IP address of the unit.

Obtaining the IP Address

1. Make sure the unit is powered.
2. Connect a display from the HDMI OUT port on the AT-UHD-SW-510W to a display.

NOTE: The **HDBaseT OUT** port can also be used as an output port. To do this, a compatible receiver, such as the AT-UHD-EX-100CE-TX-PSE, must be connected between the **HDBaseT OUT** port on the AT-UHD-SW-510W and the **HDBaseT IN** port on the receiver. Connect the display to the receiver unit.

3. Press and release the **IP** button on the front panel to display the IP address of the AT-UHD-SW-510W on the connected display.



Accessing the webGUI

The AT-UHD-SW-510W includes a built-in webGUI, which allows easy 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-UHD-SW-510W 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-UHD-SW-510W **Login** page will be displayed.
4. Enter the following information on the **Login** page.

   Login: admin
   Password: Atlona

5. Click the **Login** button.
6. Refer to User Manual for detailed operation of the webGUI.

NOTE: Refer to the IT Deployment Guide for detailed information on configuring network modes.

Troubleshooting

Problem	Solution
The source image is not displayed.	• Check all cable connections between the AT-UHD-SW-510W and the source(s) and display. • Check the input indicators on the front panel to make sure that the correct input is selected. Press and release the **INPUT** button to cycle through each input. • Try switching to another input to verify all source connections.
Auto-switching is not working.	• Check all cable connections between the AT-UHD-SW-510W and source devices. If the cable between the source and the AT-UHD-SW-510W is damaged or is not secure, then this will prevent auto-switching from working correctly. • Verify that audio switching is set to ON, under the Configuration menu in the webGUI.
The USB-C port is not charging my USB device.	• Check that the USB cable is not damaged and provides a secure connection between the AT-UHD-SW-510W and the USB device. • Check the voltage rating of the connected device to make sure it is compatible. Maximum power and voltage ratings for the USB-C port are as follows: 60 W at 20 V, 36 W at 12 V, and 15 W at 5 V.
The AT-UHD-SW-510W is not controlling the display.	**RS-232** • Verify the wiring of the RS-232 captive screw connector. • Make sure that the proper command syntax is being used; use an RS-232 terminal emulator to verify the command. • Check that the baud rate is set to 9600. Also verify that the device ID, control method for the display, and control settings for the AT-UHD-SW-510W are correct. **IP** • Make sure that the AT-UHD-SW-510W is on the same network as the display. • Ping the display to verify that it is reachable. • Verify that proper command syntax is being used. **CEC** • Check CEC settings on the display. • Verify that proper command syntax is being used.

Notes

Notes

Notes

Version 3

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