



## 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. 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

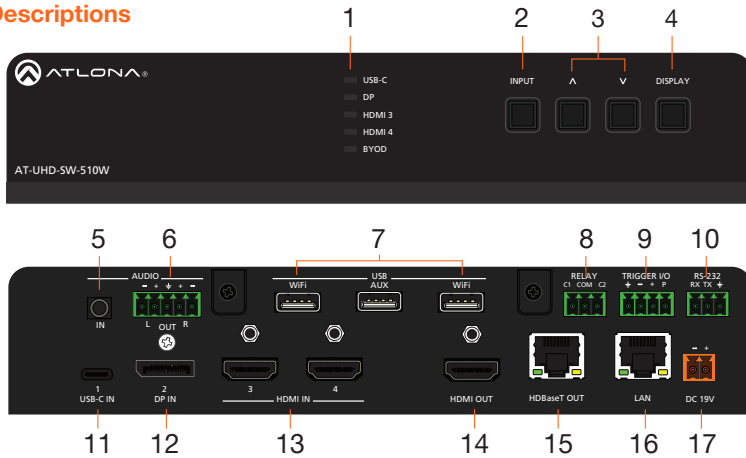
- 1 x AT-UHD-SW-510W
- 1 x Captive screw connector, 5-pin
- 1 x Captive screw connector, 4-pin
- 2 x Captive screw connector, 3-pin
- 2 x Wi-Fi antennae
- 1 x 19V DC power supply
- 1 x Long rack ear
- 2 x Short rack ear
- 2 x Mounting plates
- 4 x Mounting screws
- 1 x Installation Guide



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



## Panel Descriptions



### 1 Input Indicators

Displays the currently selected input.

### 2 INPUT

Press this button to cycle through each input.

### 3 Cursor Buttons

Adjust the volume on the display.

### 4 DISPLAY

Press this button to toggle the power state of the desired display.

### 5 AUDIO IN

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

### 6 AUDIO OUT

Use the included captive screw connector to connect a balanced audio device.

### 7 USB

Connect the included Wi-Fi antennae to these ports. These ports also support Miracast™, Google Cast™, and Apple AirPlay®.

### 8 RELAY

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

### 9 TRIGGER I/O

Connect voltage-controlled device, such as an occupancy sensor, to this port.

A 4-pin captive screw connector is required.

### 10 RS-232

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

### 11 USB-C

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

### 12 DP IN

Connect a DisplayPort device to this port.

### 13 HDMI IN

Connect an HDMI cable from each of these ports to an HD/UHD source.

### 14 HDMI OUT

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

### 15 HDBaseT OUT

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

### 16 LAN

Connect an Ethernet cable from this port to the network.

### 17 DC 19V

Connect the included power supply to this port using the included 2-pin captive screw connector.



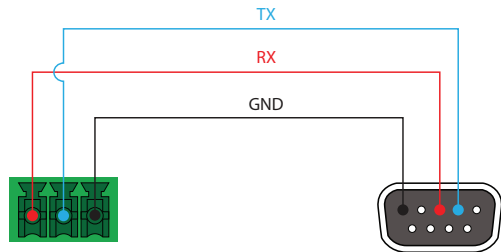
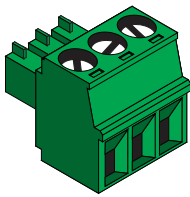
## RS-232

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.



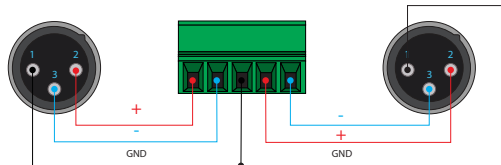
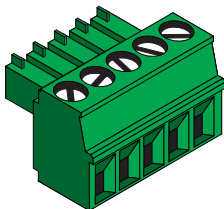
**NOTE:** Typical DB9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices functions of pins 2 and 3 are reversed.



## 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.



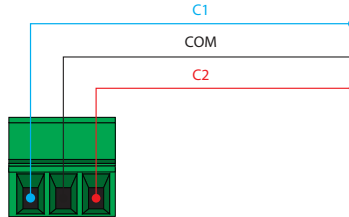
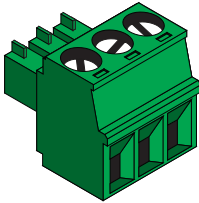
Balanced XLR audio



## Relay

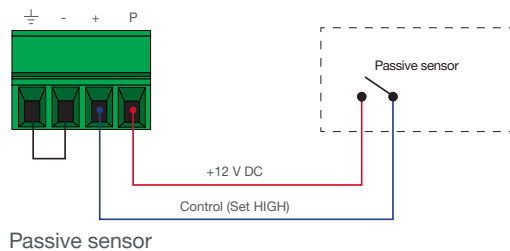
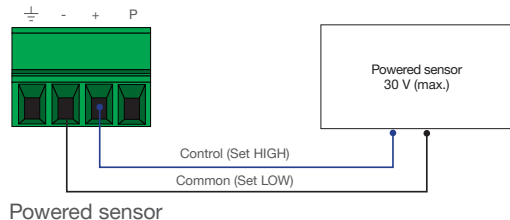
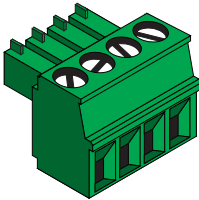
The AT-UHD-SW-510W provides a **RELAY** port, allowing the control of screens, curtains, and other devices. Use a 48 V DC relay with no more than 1 A current draw.

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



## Trigger

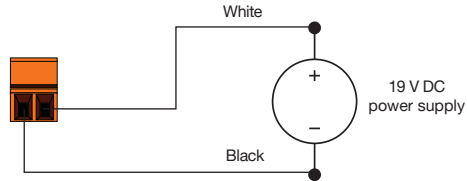
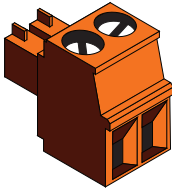
The **TRIGGER I/O** allows voltage-controlled devices, such as an occupancy sensor, to be connected to the AT-UHD-SW-510W. Use the included 4-pin captive screw connector to connect the device. Voltage range is 3 to 30 V DC.





## Power Connector

Locate the included orange captive screw connector and wire the included power supply to the block, as shown below. Do not use high-torque devices, when securing the wires, as this may damage the screws and/or connector block.



## 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.

### Single-unit rack installation

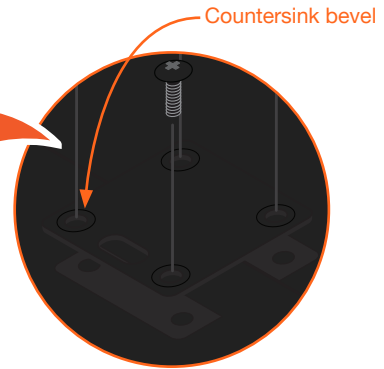
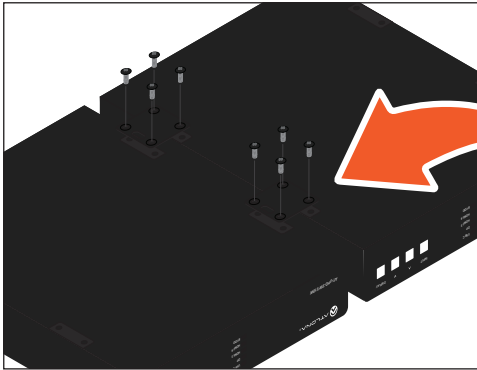
1. Attach the included small rack ear to one side of the AT-UHD-SW-510W, using the included screws.
2. Attach the included longer rack ear to the opposite side of the AT-UHD-SW-510W using the included screws.





## 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 pre-drilled holes on the bottom of the enclosure. When attaching mounting plates, the countersink bevels on the mounting plate should face upward.



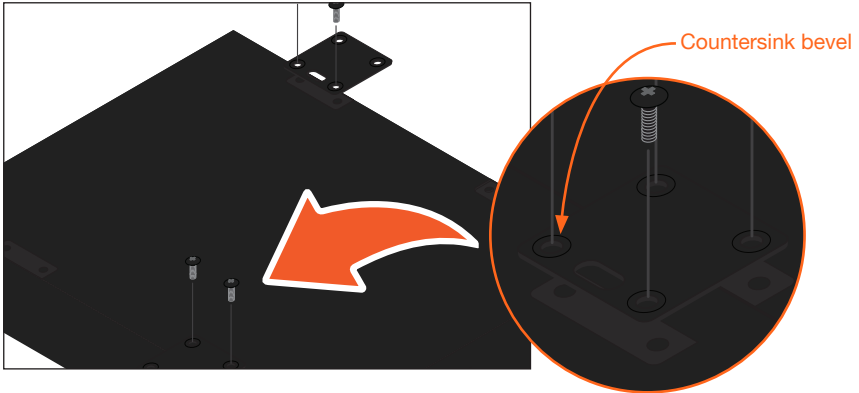
3. Turn the attached units over and install the included rack ears to one side of each enclosure using the included screws.



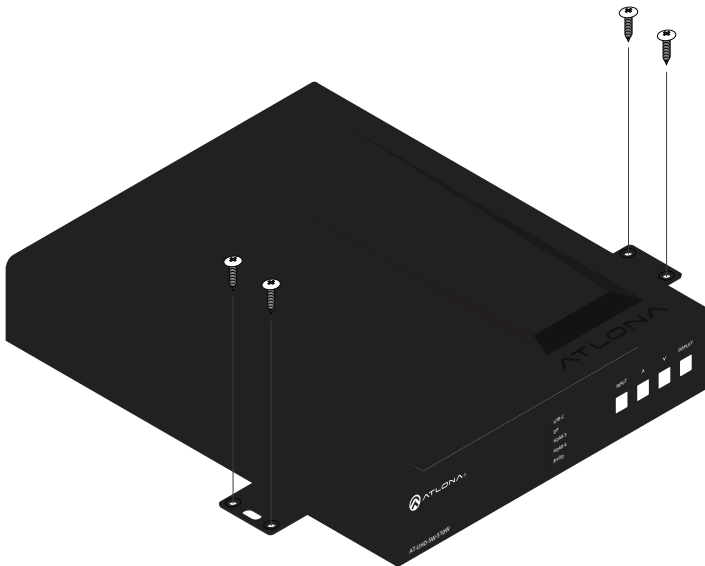


## Flat surface

1. Turn the unit upside down 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.



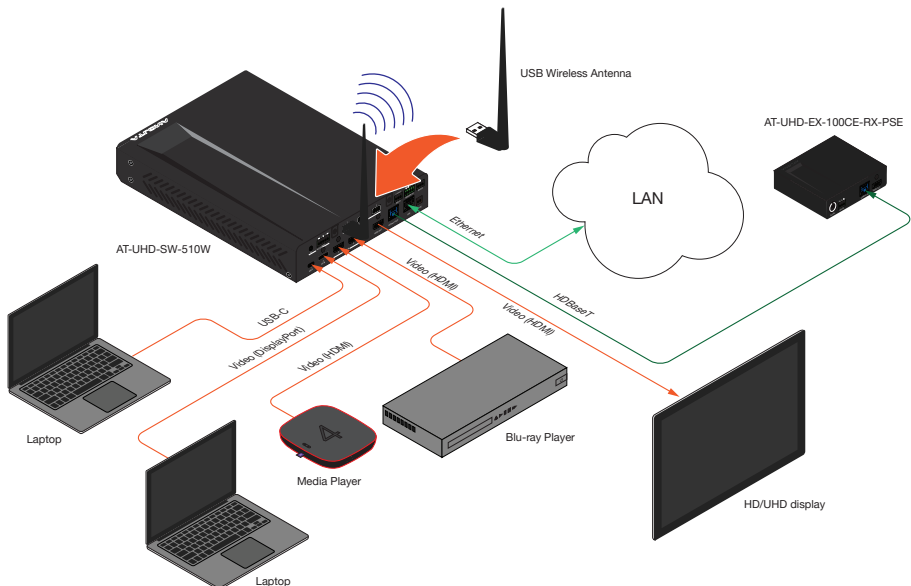
**NOTE:** The unit can also be mounted under a flat surface, such as a table, by turning the unit upside down.



## 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 three USB wireless antennae to the **WiFi** ports.
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 orange captive screw connector block to the **DC 19V** connector.
13. Connect the included power supply to an available AC outlet.

## 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, 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 a static IP address is desired, the IP address of 192.168.1.254 is used by default.

### Switching the IP mode

Once the desired IP mode has been selected, use an IP scanner to locate the AT-UHD-SW-510W on the network. Use the MAC address, printed on the sticker (on the bottom of the unit), to identify the unit within the IP scanner.

- **Static IP mode**  
Press and hold the **DISPLAY** button, for approximately 15 seconds, until all input indicators (USB-C, DP, HDMI 3, HDMI 4, and BYOD) on the front panel blink twice.
- **DHCP mode**  
Press and hold the **DISPLAY** button, for approximately 15 seconds, until all input indicators (USB-C, DP, HDMI 3, HDMI 4, and BYOD) on the front panel blink four times.

### Auto IP mode

If the AT-UHD-SW-510W 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-UHD-SW-510W 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.



## 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: root  
Password: Atlona
5. Click the **Login** button.



## Troubleshooting

Problem	Solution
The source image is not displayed.	<ul style="list-style-type: none"><li>• Check all cable connections between the AT-UHD-SW-510W and the source(s) and display.</li><li>• Check the input indicators on the front panel to make sure that the correct input is selected. Press and release the <b>INPUT</b> button to cycle through each input.</li><li>• Try switching to another input to verify all source connections.</li></ul>
Auto-switching is not working.	<ul style="list-style-type: none"><li>• 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.</li><li>• Verify that audio switching is set to ON, under the Configuration menu in the webGUI.</li></ul>
The USB-C port is not charging my USB device.	<ul style="list-style-type: none"><li>• Check that the USB cable is not damaged and provides a secure connection between the AT-UHD-SW-510W and the USB device.</li><li>• 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.</li></ul>
The AT-UHD-SW-510W is not controlling the display.	<ul style="list-style-type: none"><li>• Verify the wiring of the RS-232 captive screw connector.</li><li>• Make sure that the proper command syntax is being used; use an RS-232 terminal emulator to verify the command.</li><li>• Check that the proper baud rate, device ID, control method for the display, and control settings for the AT-UHD-SW-510W are correct.</li><li>• Check CEC settings on the display.</li></ul>

