



## Introduction

The Atлона **AT-UHD-SW-510W** is a 5x2, multi-format matrix 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 matrixed or mirrored HDMI and HDBaseT outputs. The HDBaseT output is ideal for use with the Atлона AT-UHD-EX-100CE-RX-PSE HDBaseT receiver, or the AT-HDVS-SC-RX scaling HDBaseT receiver. It also includes automatic input switching and automatic display control capability, both applicable to wired and wireless source connections. This unique multi-format matrix switcher and wireless gateway provides a universal connectivity solution for presentation devices in a wide range of professional AV applications.

## Applications

- Meeting spaces**  
 The SW-510W provides the flexibility to accept any presenter device, whether wired or wireless. This capability is ideal for a wide range of meeting environments, from a huddle room to a large presentation space in a convention center.
- Classrooms and auditoriums**  
 A credenza or lectern-based AV system for resident sources, plus wireless connectivity for a participant's laptop or tablet.
- Small to medium-sized meeting spaces**  
 The SW-510W is compact and ideal for under-table mounting. It conveniently provides automatic switching and display control for simplified user operation, especially with laptops and mobile devices brought into the system.
- Conference rooms and boardrooms**  
 The SW-510W features two matrixed outputs for seamless integration into a display and a hardware-based videoconferencing system, with additional versatility by enabling wireless AV content presentations to the far end. The matrix switching capability provides the convenience of auto-switching for local BYOD content that feeds into the codec, while simultaneously allowing far-end content to be shared.
- Presentation spaces where two displays are needed**  
 This switcher can be installed in a lectern to serve a confidence monitor, plus the primary display in a remote location. With matrixed outputs, the SW-510W also can support two simultaneous presenters on two screens.

## Key Features

### 5x2 universal AV matrix switcher

- Two HDMI, one DisplayPort, and one USB-C\* input, plus a dedicated wireless AV input.
- Delivers true BYOD capability for a wide range of presentation sources.

### Matrixed or mirrored HDMI and HDBaseT outputs

- HDBaseT output transmits AV, control, and Ethernet up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Mirrored 18 Gbps HDMI and 10 Gbps HDBaseT outputs provide flexible options for AV system designs and applications.

### Wireless AV gateway

- Provides convenient Wi-Fi connectivity for an iOS, Android†, Mac, Chromebook, or Windows-based device.
- Includes dual Wi-Fi access points – secondary access point required for Miracast (Wi-Fi Direct).
- Integrated access point can be segregated from the facility network for security reasons.

### Native platform-based, wireless interfacing

- Allows screen mirroring without the need for a separate app.
- Supports wireless video up to 1080p/30 4:2:0 (up to 1080p/60 with Miracast).§
- Supports Bluetooth®-assisted iOS device discovery. An optional Bluetooth adapter is required (not included with the SW-510W). The Plugable and Kinivo Bluetooth 4.0 adapters are recommended.
- Also supports Miracast over Infrastructure for use of facility Wi-Fi or Ethernet network.

### Automatic input selection and automatic display control

- Automatically changes display power state, and switches between inputs based on device connection or disconnection from the switcher.
- Works for both wired and wireless source devices.
- Enables effortless, automated system operation without the need for an external control system.

\* USB-C port supports AV and device charging, but not USB data.

† Does not support casting of video from apps such as YouTube, Netflix, Hulu, and Amazon Prime Video.

- When an input is routed to one of the two available outputs, auto-switching remains available for the remaining inputs.

### USB-C charging for laptops, tablets, and smartphones

- Conveniently provides mobile device powering during a meeting or presentation.
- Simple one-cable connection for AV and charging.

### 4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling, plus support for 4K/60 4:4:4 and HDR formats on local ports (HDMI, USB-C, and DisplayPort)

- Ideal for new and emerging 4K/UHD and HDR-capable sources and displays.
- Compatible with 4K HDR10 and Dolby® Vision™ @ 60 Hz.
- Recommended HDBaseT receiver: AT-UHD-EX-100CE-RX-PSE.

### Occupancy sensor triggering

- When used with a third-party occupancy sensor, the switcher can wake from standby, power up the display, and deliver a welcome screen when someone walks into the room.
- Greatly simplifies user operation by avoiding the need to manually power up the system.

### TCP/IP, RS-232, and contact closure control

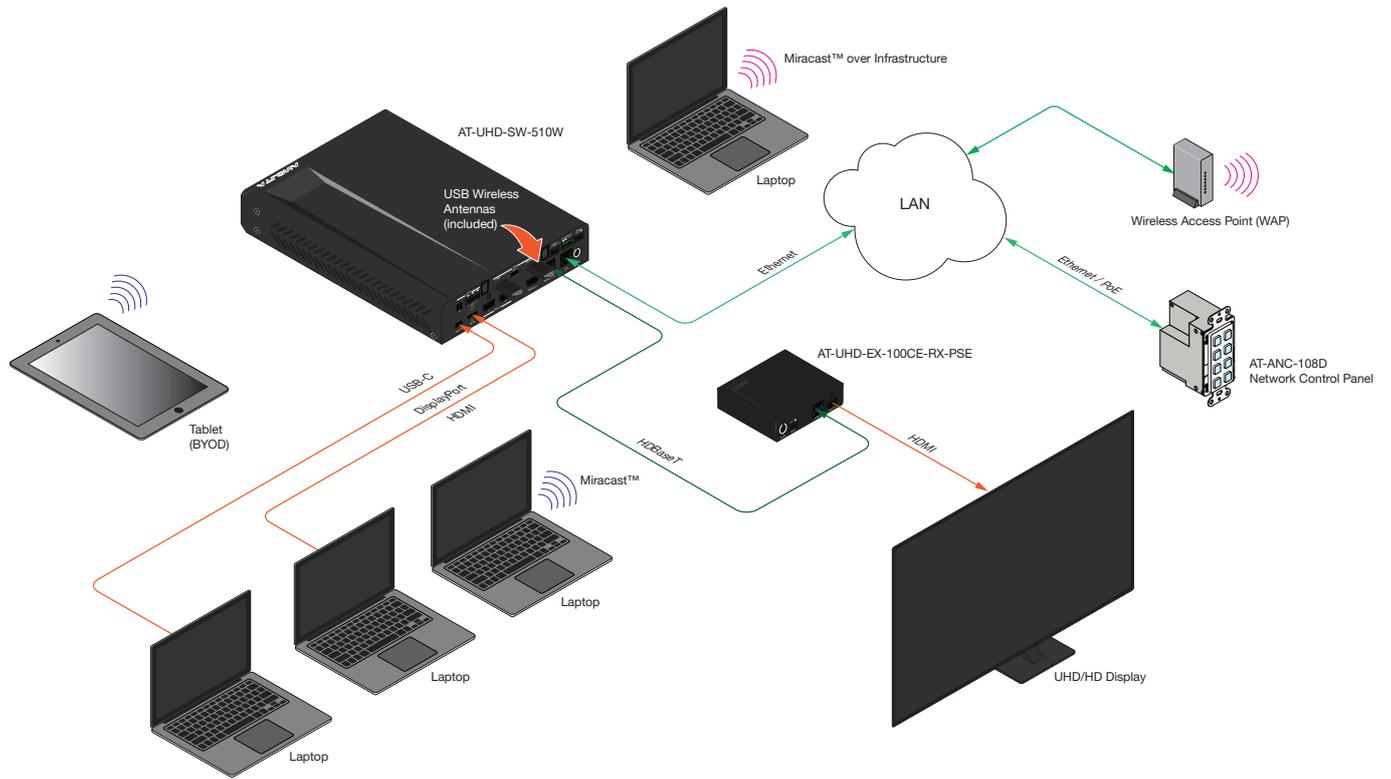
- Ideal for IP-based control from Atlona Velocity Control System and the AT-ANC-108D button control panel.
- Also compatible with third-party control systems.
- Contact closure control ideal for room functions such as motorized screens and display lifts, as well as occupancy sensing and remote button controls.

### Award-winning 10 year limited product warranty

- Ensures long-term product reliability and performance in commercial and residential systems.
- Specify, purchase, and install with confidence.

§ Video resolution capability is dependent on wireless signal quality.

## Connection Diagram



## Specifications

Connectors, Controls, and Indicators	
HDMI IN	2 - Type A, 19-pin female
HDMI OUT	1 - Type A, 19-pin female
DP IN	1 - 20-pin female
USB-C IN	1 - 24-pin female, AV input (Alternate Mode)
USB	3 - USB 2.0 Type A for Wi-Fi® antenna modules
RS-232	1 - 3-pin captive screw (bidirectional)
RELAY	1 - 3-pin captive screw, normally open (NO), with adjustable Toggle and Pulse modes Electrical rating: 48 V @ 1 A
TRIGGER	1 - 4-pin captive screw Electrical rating: 30 V @ 1 A (max.)
AUDIO IN	1 - 3.5 mm, unbalanced 2-channel
AUDIO OUT	1 - 5-pin captive screw, balanced / unbalanced 2-channel
HDBaseT OUT	1 - RJ45
LAN	1 - RJ45
DC 24V	1 - 4-pin, locking
<b>Control Buttons:</b> INPUT, CURSOR (UP/DOWN), DISPLAY	4 - momentary, tact-type
<b>Input Indicators:</b> USB-C, DP, HDMI 3, HDMI 4, BYOD	5 - LED, blue

Video	
UHD/HD/SD	4096x2160@60/30/25/24Hz*, 3840x2160@60/30/25/24Hz*, 1080p@60/59.9/50/30/29.97/25/24/23.98Hz, 1080i@60/59.94/50Hz, 720p@60/59.94/50Hz, 576p@50Hz, 576i@50Hz, 480p@60/59.96Hz, 480i@60Hz
VESA	2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480
USB-C	Up to 4K/UHD @ 60Hz for devices supporting USB-C Alternate Mode video output
Wireless	Up to 1080p @ 30Hz 4:2:0 (up to 1080p @ 60Hz with Miracast™); dependent on wireless signal quality
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Wireless Chroma Subsampling	4:2:0
Color Depth	8-bit, 10-bit, 12-bit
HDR †	HDR10 and Dolby® Vision™ @ 60Hz; HDMI or DisplayPort inputs only

\* HDMI output supports 4K/UHD @ 50 or 60Hz with 4:4:4 chroma sampling. HDBaseT output supports 4K/UHD @ 50 or 60Hz with 4:2:0 chroma subsampling. † HDR not supported for HDBaseT output.

Audio	
Pass-Through Formats	PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, Dolby Atmos®, DTS® Digital Surround™, DTS-HD Master Audio™, and DTS:X®
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

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e/6	230	70	330	100
CAT6a/7	330	100	330	100

Signal	
Maximum TMDS Clock	600 MHz (300 MHz over HDBaseT)
HDMI	HDMI 2.0*
HDBaseT	10 Gbps †
CEC Support	Yes
HDCP	2.2 (wired device connections, only)

\* 18 Gbps supported for HDMI 2.0 output. † HDBaseT output limited to 10 Gbps.

USB	
USB-C Power	Up to 60 W / 3 A at 20 V
USB-C Device Charging Capability	Up to 20 V, 3 A Output: 60 W @ 20 V, 36 W @ 12 V, 15 W @ 5 V

IP	
Protocols	DHCP, HTTP, Telnet, SSH, TCP/IP, UDP
Security	HTTPS, SSL, TLS
Ethernet Speed	10/100/1000 Mbps
Addressing	DHCP, static
Wi-Fi	IEEE 802.11n/ac 2.5 GHz / 5 GHz
Wi-Fi Protocols	WPA, WPA2, PSK
Antenna	2 included

Temperature	Fahrenheit	Celsius
Operating	32 to 122	0 to 50
Storage	-4 to 140	-20 to 60
Humidity (RH)	20% to 90%, non-condensing	

Power	
Consumption (full load)	121 W
Idle Consumption	35 - 40 W
Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 24 V / 5 A DC

Dimensions	Inches	Millimeters
H x W x D (w/ feet)	1.77 x 8.46 x 10.19	48 x 215 x 259
H x W x D (w/o feet)	1.73 x 8.46 x 10.00	44 x 215 x 254

Weight	Pounds	Kilograms
Device	3.70	1.68

Certification	
Device	CE, FCC, UL