The Atlona **AT-UHD-SW-510W** is a 5×2, 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 Atlona 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.

The USB-C port on the SW-510W is ideal for Mac, Chromebook, and Windows PCs. All inputs and the local HDMI output are compatible with video signals up to 4K/UHD @ 60 Hz with 4:4:4 chroma sampling, as well as data rates up to 18 Gbps. For integration convenience and flexibility, simultaneous 18 Gbps HDMI and 10 Gbps HDBaseT outputs make the SW-510W ideal for various presentation scenarios such as primary and confidence displays in a corporate auditorium or lecture hall. The HDBaseT output extends video, audio, control, and Ethernet up to 100 meters. (For AV signals exceeding 10 Gbps, 4K/UHD video will be subsampled to 4:2:0, or HDR metadata removed for HDBaseT transmission.)

For more information about the SW-510W, please refer to this comprehensive introduction and overview.

Wireless BYOD Connectivity

In addition to wired AV connections, the SW-510W interfaces with a presenter's iOS, Android, Mac, Chromebook, or Windows device over Wi-Fi®, and allows screen mirroring without the need to install an app. It can serve as an integrated, dual band access point, or be networked into an existing Wi-Fi installation. With a second antenna (included), the SW-510W can also provide simultaneous Wi-Fi and Miracast™ (Wi-Fi Direct®). In addition, the SW-510W supports Miracast over Infrastructure which allows Miracast over a facility Wi-Fi network or LAN, rather than over a direct wireless link. Please click here for complete information about wireless AV connectivity with the SW-510W.

(**Note:** URL casting is not available for video from apps such as YouTube™, Netflix®, Hulu®, and Amazon® Prime® Video.)

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. An instructor can moderate wireless AV presentations between up to four student mobile devices.

- **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.

Technical Features

5×2 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
- *USB-C port supports AV and device charging, but not USB data.*

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*
- Dual HDMI (18 Gbps) and HDBaseT (10 Gbps) outputs provide flexible options for AV system designs and applications
- *To achieve optimal HDBaseT performance, CAT6a or CAT7 shielded twisted pair cable is highly recommended.*

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
- *Note: Does not support URL casting of video from apps such as YouTube, Netflix, Hulu, and Amazon Prime Video.*

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
- Wireless AV interfacing can be selectively enabled or disabled for each native platform
- *Please click here for complete information about wireless AV connectivity with the SW-510W.*
- **Video resolution capability is dependent on wireless signal quality.*

Secure wireless access and content sharing

- Prevent unauthorized Wi-Fi access (room hijacking) with user-defined or randomly generated authentication passwords
- Prevent unauthorized iOS and Mac wireless content sharing with randomly generated PIN pin codes, refreshed every five minutes
- BYOD wireless connection can be set to a maximum specified duration
- Configurable firewall available to restrict incoming and outgoing network traffic

Supports industry-standard, network security features and protocols

- Prevent unauthorized Wi-Fi access (room hijacking) with user-defined or randomly generated authentication passwords
- HTTPS, SSH, IEEE 802.1x, and WebSockets with TLS, WPA2-PSK, and AES-128 encryption

HDCP 2.2 compliant

- Adheres to latest specification for High-bandwidth Digital Content Protection
- Allows protected content to pass between authenticated devices
- HDCP 2.2 supported only for wired AV connections

Audio de-embedding

- De-embeds two channel PCM audio from any video source to a balanced, analog audio output
- Independent gain controls for embedded and de-embedded two-channel PCM audio, plus bass / treble controls for the analog audio output

EDID management

- Manages EDID communications with the source through a display's EDID or internally stored EDID
- Ensures desired audio formats and video resolutions are provided to the AV system

HDCP management

- Automatically reports HDCP compliance status to the source based on the sink device

Moderator mode for wireless AV presentations

- Allows a user to moderate between up to four wirelessly connected devices through the SW-510W web GUI
- Content from mobile devices (low refresh) can be previewed by the admin
- Moderator can allow or kick (remove) any device from presenting on-screen

Automatic display control

- Automatically changes display power state based on device connection or disconnection from the switcher
- Works for both wired and wireless source devices
- Control signals to display are transmitted via IP, RS-232, or CEC over HDBaseT, as well as RS-232 to a local display
- Enables display and volume control. CEC enables control of consumer displays.
- Also can be configured to power off display after a period of inactivity

Automatic input selection

- Selects active input based on device connection or disconnection from the switcher, using hot plug detect and video detection technology
- Works for both wired and wireless source devices
- Enables simplified, automatic system operation with no user intervention necessary

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*
- *Atlona strongly recommends using the supplied USB-C cable accessory.*

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

- HDBaseT output supports 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling
- Local HDMI, USB-C, and DisplayPort ports are compatible with 4K HDR10 @ 60 Hz and Dolby® Vision™ @ 60 Hz, as well as HLG (Hybrid Log-Gamma) for 60p HDR broadcast services

Splash screen customizable with welcome message and BYOD connection information

- The SW-510W displays a welcome screen with instructions for participants and guests to present from their devices
- Messaging and connection instructions can be customized with the option to display or hide specific network or access information
- Ability to upload multiple splash screen background images that can be rotated

- HDCP compliance can also be disengaged through AMS or a control system
- Allows non-protected material from PCs to pass to non-compliant displays, streaming devices, and teleconference systems; protected content is not transmitted

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

Trigger I/O ports for occupancy sensing

- When used with an occupancy sensor, the switcher can be set to automatically go into standby, and power off the display once participants have left the room
- Greatly simplifies user operation by avoiding the need to manually power the system on or off

Front panel button controls and signal status LEDs

- Allow simple and convenient control of source switching as well as display on/off and audio volume
- Front panel LEDs highlight the currently selected input, including wireless BYOD

Rack-mountable 1U, half rack width enclosure

- Easy installation into racks and confined spaces via optional AT-UHD-SW-510W-RM rack mounting hardware
- Ideal for under-table installation with included mounting hardware

Included accessories

- User guide, 2 USB Wi-Fi adapters/antennas, surface mounting brackets, 2 meter (6.5 foot) USB-C male-to-male cable (USB 3.1 Gen 1), and external universal power supply

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