



Introduction

The Atлона **AT-OME-MS52W** is a 5x2 matrix switcher with HDMI, USB-C, DisplayPort, and wireless AV inputs, plus HDMI and HDBaseT outputs. It features wireless presentation capability and native screen mirroring for iOS®, Android™, Mac®, Chromebook™, and Windows®. Part of the Omega™ Series of integration products for modern AV communications and collaboration, the OME-MS52W is HDCP 2.2 compliant and features HDBaseT extension for video up to 4K/60 4:2:0, plus embedded audio, control, Ethernet, and USB over distances 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. The integrated USB extension addresses the challenge of connecting between USB devices at remote locations, and is ideal for software video conferencing and touch or interactive displays. The OME-MS52W includes USB 2.0 and USB-C interfaces for three host PCs, plus two peripheral devices such as a camera, microphone, speakerphone, or keyboard and mouse.

Applications

- Meeting spaces**
 The OME-MS52W 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 16 student mobile devices.
- Video conferencing**
 With the OME-EX-RX or OME-SR21 receiver, this switcher provides interfacing for local and remote USB devices for soft codec conferencing, with video and USB switched together between host PCs.

Key Features

5x2 AV matrix switcher

- HDMI, USB-C, and DisplayPort inputs, plus a dedicated wireless AV input.
- No need to provide adapters for USB-C or DisplayPort to HDMI.

USB-C input for AV, data, and device charging

- Provides immediate compatibility with laptops and tablets with USB-C ports supporting AV output.
- Allows clutter-free, single cable connectivity to a PC for video conferencing and collaboration.

HDBaseT and HDMI outputs with selectable AV switching modes

- Selectable switching modes available with auto-input selection when outputs are mirrored or matrixed.
- Enables simple configuration and effortless user operation, tailored to the specific AV application.

Wireless AV gateway

- Provides convenient Wi-Fi connectivity for an iOS, Android, Mac, Chromebook, or Windows-based device.

Native platform-based, wireless interfacing

- Allows screen mirroring without the need for a separate app.
- Wireless AV interfacing can be selectively enabled or disabled for each native platform.

Moderator mode for wireless AV presentations

- Allows a user to moderate between up to 16 wirelessly connected devices through the OME-MS52W web GUI.
- Moderator can allow or kick (remove) any device from presenting on-screen.

Video, audio, power, and data over category cable utilizing HDBaseT technology

- Transmits up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Uses easy-to-integrate category cable for low-cost, reliable system installation.

USB 2.0 interfacing and extension over HDBaseT

- Two USB type B interfaces for connection to a host PC, plus two USB type A ports for a peripheral device such as a microphone, speakerphone, or a keyboard and mouse. USB-C input is also available for data connection to a host PC.
- Provides an ideal USB integration solution for software video conferencing, and applications with interactive collaboration.⁽¹⁾

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.

Contact closure for screen or display lift control

- Dry contact closure triggers electronic screen or lift operation based on active or standby mode of the switcher / scaler.
- Automates screen or lift activation at system power-up; eliminates need for a separate AV control system.

Trigger I/O ports for occupancy sensing

- 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.

Specifications

| Video | |
|-----------------------------------|--|
| HDMI | 2.0 ⁽²⁾ |
| HDCP | 2.2 (wired-device connections, only) |
| UHD/HD | 4096x2160 @ 60 ⁽³⁾ /50/30/25/24 Hz 3840x2160 @ 60 ⁽³⁾ /50/30/25/24 Hz 1920x1080p @ 60/59.9/50/30/29.97/25/24/23.98 Hz 1920x1080i @ 30/29.97/25 Hz 1280x720p @ 60/59.94/50 Hz 720x576p @ 50 Hz 720x576i @ 50 Hz 640x480p @ 60/59.96 Hz 640x480i @ 30 Hz |
| VESA All resolutions are 60 Hz | 2560x1600 2048x1536 1920x1200 1680x1050 1600x1200 1440x900 1400x1050 1280x1024 1280x800 1366x768 1360x768 1152x864 1024x768 800x600 640x480 |
| USB-C ⁽⁴⁾ | Up to 4K/UHD @ 60 Hz for devices supporting USB-C Alternate Mode video output |
| Wireless | Up to 1080p @ 30 Hz 4:2:0 (up to 1080p @ 60 Hz with Miracast™); dependent on wireless signal quality |
| Color Space | YUV, RGB |
| Chroma Subsampling | 4:4:4, 4:2:2, 4:2:0 |
| Color Depth | 8-bit, 10-bit, 12-bit |
| HDR ⁽⁵⁾ | HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60 Hz |

| Audio | | | |
|-------------------------------------|--|---|--|
| HDMI / HDBaseT Pass-Through Formats | LPCM 2.0 LPCM 5.1 LPCM 7.1 | Dolby® Digital Dolby Digital Plus™ Dolby TrueHD Dolby Atmos® | DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X® |
| 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 | < 0.009% @ 20 Hz to 20 kHz | | |
| SNR | > 94 dB @ 1 kHz, zero clipping @ 0 dBFS, unweighted | | |
| Sample Rate | 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz | | |

| USB | |
|----------------------------------|---|
| Signal | 2.0 |
| Maximum Data Rate | 120 Mbps |
| USB-C | Supports Audio, Video, device and host data, and up to 60W power charging |
| USB-C Device Charging Capability | Up to 20 V, 3 A Output: 60 W @ 20 V, 36 W @ 12 V, 15 W @ 5 V |

| Protocols | |
|----------------|---------------------------------|
| Addressing | DHCP, static |
| Security | HTTPS, SSL, TLS |
| Authentication | IEEE 802.1x |
| Wi-Fi | IEEE 802.11n/ac 2.5 GHz / 5 GHz |
| Wi-Fi Security | WPA, WPA2, PSK |

| Control | |
|---------|--|
| RS-232 | Device control and configuration Bidirectional pass-through from control system over HDBaseT Supported baud rates: 2400, 4800, 9600, 19200, 38400, 57600, 115200 |
| IP | Protocols: HTTPS, Telnet, mDNS Modes: DHCP, Static – selectable through front panel and built-in web server |
| CEC | Yes |

| 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 |

| Connectors | |
|-------------|---|
| 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 - USB Type-C v3.1, 24-pin female, AV input (Alternate Mode) |
| USB | 3 - USB 2.0 Type A for Wi-Fi® antenna modules |
| USB HOST | 2 - Type B, female |
| USB HUB | 2 - Type A, 4-pin female |
| 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 (max.) |
| TRIGGER I/O | 1 - 4-pin captive screw, supports 3 - 30 V DC input range, power supply is 24 V @ 100 mA 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, 10/100/1000 Mbps |
| DC 24V | 1 - 4-pin DIN, locking |

| Indicators and controls | |
|--|--|
| Output Indicators USB-C, DP, HDMI 3, HDMI 4, BYOD | 5 - LED, blue (OUT1: HDMI) 5 - LED, blue (OUT2: HDBaseT) |
| Control Buttons | 4 - momentary, tact-type POWER: Power-off the unit SHOW IP: Displays the IP address of the unit on the connected display IP MODE: Toggles IP mode RESET: Resets the unit to factory-default settings |

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

| Power | |
|-----------------------|--|
| Consumption | 143 W |
| External Power Supply | 100 - 240 V AC, 50/60 Hz Output: 24 V / 6.25 A DC |

| Dimensions | | Inches | Millimeters |
|--------------------|--|------------------|----------------|
| Device (H x W x D) | | 1.65 x 8.62 x 10 | 42 x 219 x 254 |
| Weight | | Pounds | Kilograms |
| Device | | 3.89 | 1.77 |
| Certification | | | |
| Device | | CE, FCC | |
| Power | | CE, FCC, UL | |

Accessories

| Compatible Receivers | |
|----------------------|---|
| AT-OME-EX-RX | HDBaseT Receiver for HDMI with USB |
| AT-OME-SR21 | Scaler for HDBaseT and HDMI with USB |
| AT-OME-RX11 | HDBaseT Receiver for HDMI with Audio |
| AT-UHD-SW-510W-RM | AT-UHD-SW-510W Rack Mount |
| AT-RACK-1RU | Heavy Duty Rack Shelf |
| AT-LC-H2H | LinkConnect HDMI to HDMI Cable |
| AT-LC-MDP2H | LinkConnect Mini DisplayPort to HDMI Cable |
| AT-LC-UC2UC-2M | LinkConnect USB-C to USB-C Cable (2 meter / 6 feet) |

- (1) Maximum 120 Mbps data rate supported over HDBaseT.
- (2) 18 Gbps supported for HDMI 2.0 output.
- (3) HDMI output supports 4K/UHD @ 50 or 60Hz with 4:4:4 chroma sampling. HDBaseT output supports 4K/UHD @ 50 or 60 Hz with 4:2:0 chroma subsampling.
- (4) USB-C does not support the following input resolutions: 2560x2048, 2048x1536, 2028x1080, and 1440x1050.
- (5) HDR not supported on HDBaseT output.