Omega™
Multi-format 5x2 Matrix Switcher
for HDMI, USB-C, DisplayPort , and HDBaseT
with USB and Wireless Link

a **P**ANDUIT company

Introduction

The Atlona **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.

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Key Features

5×2 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.

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Specifications

Video	
HDMI	2.0[2]
HDCP	2.2 (wired-device connections, only)
UHD/HD	4096×2160 @ 60[3]/50/30/25/24 Hz 1280x720p @ 60/59.94/50 Hz 3840×2160 @ 60[3]/50/30/25/24 Hz 720x576p @ 50 Hz 1920x1080p @ 60/59.9/50/30/29.97 720x576i @ 50 Hz /25/24/23.98 Hz 640x480p @ 60/59.96 Hz 1920x1080i @ 30/29.97/25 Hz 640x480i @ 30 Hz
VESA All resolutions are 60 Hz	2560×1600 1280×800 2048×1536 1366×768 1920×1200 1360×768 1680×1050 1152×864 1600×1200 1024×768 1440×900 800×600 1400×1050 640×480 1280×1024
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	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 2.4 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

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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	

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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)

Footnotes

(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.

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