



Introduction

The Atлона **AT-OME-MS42** is a 4x2 matrix switcher with HDMI, USB-C, and DisplayPort inputs, plus HDMI and HDBaseT outputs. Part of the Omega™ Series of integration products for modern AV communications and collaboration, the OME-MS42 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. Additionally, 4K downscaling to 1080p @ 60, 30, or 24 Hz is available for the HDMI output when connected to an HD sink. 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-MS42 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. It is ideal for video conferencing and many other 4K presentation applications with the OME-EX-RX receiver and OME-SR21 scaling receiver.

Applications

- 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. As a matrix switcher with downscaling, the OME-MS42 is also ideal for hardware-based video conferencing, with the ability to route and optimize any source content to the codec far-end.
- Meeting rooms and conference rooms**
 The OME-MS42 can serve as an AV integration centerpiece in a credenza, with interfacing into sources in the rack.
- Auditoriums and lecture halls**
 This switcher can be used for presenting 4K video content through the projector, while also optimizing for a 1080p confidence monitor.

Key Features

4x2 AV matrix switcher

- HDMI, USB-C, and DisplayPort inputs.
- 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

- HDBaseT output transmits AV, control, Ethernet, and USB up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Selectable switching modes available with mirrored or matrixed outputs.
- Enables simple configuration and effortless user operation, tailored to the specific AV application.

4K to 1080p downscaling

- Integrated video processing available on the HDMI output for down-converting 4K/UHD @ 60 Hz to 1080p.
- Ideal for applications with 1080p displays, video conferencing codecs, and other HD sink devices.

USB 2.0 interface and extension up to 330 feet (100 meters)

- 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 or USB peripheral.
- Provides an ideal USB integration solution for software video conferencing and other applications. A maximum data rate of 120 Mbps is supported over HDBaseT.

Remote PoE+ (Power over Ethernet) or local powering

- Industry standard IEEE 802.3at PoE+ is supplied by an OME-EX-RX receiver or OME-SR21 scaling receiver over HDBaseT.
- Also can be locally powered by the optional AT-PS-2427-D4 power supply – to supply PoE to a receiver and charge a USB-C mobile device.

Audio de-embedding

- De-embeds two channel PCM audio for the HDBaseT output and delivers to a balanced, analog audio output.
- Provides direct interfacing into an external audio system.

Automatic display control

- Automatically changes display power state based on active or standby mode of the switcher. Control signals to display are transmitted via IP, RS-232, or CEC.
- Enables effortless, automated system operation without the need for an external control system.

Specifications

Video		
HDMI	2.0 (1.4 when downscaled)	
HDCP	2.2 (will downscale reporting to match connected devices – does not downscale HDCP signal)	
UHD/HD	4096×2160 @ 60 ⁽¹⁾ /50/30/25/24 Hz 3840×2160 @60 ⁽¹⁾ /50/30/25/24 Hz 1920×1080p @ 60/59.9/50/30/29.97/25/24/23.98 Hz 1920×1080i @ 30/29.97/25Hz 1280×720p @ 60/59.94/50Hz	720×576p @ 50 Hz 720×576i @ 50 Hz 640×480p @ 60/59.96 Hz 640×480i @ 30 Hz
VESA	2560×1600 @ 60 Hz 2048×1536 @ 60 Hz 1920×1200 @ 60 Hz 1680×1050 @ 60 Hz 1600×1200 @ 60 Hz 1440×900 @ 60 Hz 1400×1050 @ 60 Hz 1280×1024 @ 60 Hz	1280×800 @ 60 Hz 1366×768 @ 60 Hz 1360×768 @ 60 Hz 1152×864 @ 60 Hz 1024×768 @ 60 Hz 800×600 @ 60 Hz 640×480 @ 60 Hz
Scaler ⁽²⁾	IN	OUT
	4K @ 24 Hz 4K @ 30 Hz 4K @ 60 Hz, 4:2:0	1080p @ 24 Hz 1080p @ 30 Hz 1080p @ 60 Hz (YUV/RGB, 4:4:4)
USB-C	Up to 4K/UHD @ 60Hz	
Color Space	YUV, RGB	
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0	
Color Depth	8-bit, 10-bit, 12-bit	
HDR ⁽³⁾	HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60Hz	

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	< 0.004% @ 20 Hz to 20 kHz		
SNR	> 105 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

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 webGUI
CEC	Yes

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e/6	295	90	330	100
CAT6a/7	330	100	330	100

Connectors, Controls, and Indicators	
HDMI IN	2 – Type A, 19-pin female
DP IN	1 – DisplayPort, female
USB-C IN	1 – USB Type-C v3.1, 24-pin female, AV input (Alternate Mode)
HDMI OUT	1 – Type A, 19-pin female
HDBaseT OUT	1 – RJ45, female
USB HUB	2 – Type A, 4-pin female
USB HOST	2 – Type B, female
AUDIO OUT	1 – 5-pin captive screw, balanced / unbalanced 2-channel
RS-232	1 – 3-pin captive screw (bidirectional)
LAN	1 – RJ45, 100Base-T
PWR	1 – 4-pin DIN, locking
Control Buttons: HDMI OUT, HDBaseT OUT, DISPLAY IP MODE, RESET	3 – momentary, tact-type 2 – momentary, recessed
Function Indicators: INPUT PWR, LINK, IP MODE, RESET	8 – LED, blue 4 – LED, blue

Temperature	Fahrenheit	Celsius
Operating	32 to 113	0 to 45
Storage Temperature	-4 to 140	-20 to 60
Operating Humidity (RH)	20% to 90%, non-condensing	

Power	
Consumption	Unit only: 8.6 W Full load: 104 W (while powering USB-C device up to 60 W, HDBaseT PoE device up to 30 W, and USB type A devices up to 2.5 W each)
External Power Supply	100 - 240 V AC, 50/60 Hz Output: 24 V / 5 A DC

Dimensions	Inches	Millimeters
Device (H x W x D)	1.73 x 8.64 x 10	44 x 219.5 x 254

Weight	Pounds	Kilograms
Device	3.46	1.57

Certification	
Device	CE, FCC, UL

Accessories

Compatible Receivers	
AT-OME-EX-RX	Omega HDMI over HDBaseT Receiver with USB
AT-OME-SR21	Omega Scaler for HDBaseT and HDMI with USB

- (1) 4K/UHD p60 4:4:4 supported on input/output HDMI and USB-C input ports, 4K/UHD p60 4:2:0 is supported on HDBaseT output.
- (2) Scaler does not support frame rate conversion.
- (3) HDR supported on local output only.