



Introduction

The Atlona **AT-OME-MH21-CP** is a compact, versatile switcher with HDMI and USB-C inputs. It is equipped with features for complete AV integration in huddle rooms and small meeting spaces, including automatic switching and display control, audio de-embedding, and a USB 3.0 hub for video conferencing peripherals or touch displays. Part of the Omega™ Series of integration products for modern AV communications and collaboration, the OME-MH21-CP is HDCP 2.2 compliant and supports 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 when connected to an HD display. The OME-MH21-CP includes USB 3.0 and USB-C interfaces for two host PCs, plus two peripheral devices such as a camera, microphone, speakerphone, touch-enabled display, or keyboard and mouse. The USB-C port provides up to 60 watts of device charging capability for laptops and mobile devices.

Applications

- Huddle rooms and small meeting spaces**
 The OME-MH21-CP provides a compact, yet comprehensive and cost-effective integration solution. When installed below a meeting table, the available Pocket™ 3H (AT-PKT-3H) provides convenient tabletop AV and USB cable access for easy BYOD connectivity.
- Video conferencing**
 This switcher provides interfacing with USB devices for soft codec conferencing, with video and USB switched together between two host PCs. The USB interfacing is also ideal for a touch-enabled display, enabling on-screen control of a PC.

Key Features

Two-input AV switcher

- HDMI and USB-C inputs.
- No need to provide an adapter for USB-C to HDMI.

USB-C input for AV, data, and device charging⁽¹⁾

- Provides immediate compatibility with laptops and tablets with USB-C ports supporting AV output.
- Delivers up to 60 watts of charging for laptops and mobile devices.
- Allows clutter-free, single cable connectivity to a PC for video conferencing and collaboration.

Integrated USB 3.0 hub

- USB type B interface for connection to a host PC, plus two USB type A ports for a peripheral device such as a microphone, speakerphone, camera, or touch display. USB-C input is also available for data connection to a host PC.
- Provides an ideal USB integration solution for software video conferencing, and other applications.

Selectable 4K to 1080p downscaling

- Integrated video processing available for down-converting 4K/UHD @ 60, 30, or 24 Hz to 1080p.
- Ideal for applications with 1080p displays.

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, IR, or CEC.
- Embedded, comprehensive selection of display drivers from the Velocity™ System driver database.
- Enables effortless, automated system operation without the need for an external control system.

Automatic input selection using hot plug detect and video detection technology

- Selects active input when sources are connected or if there is a change in source power status.
- Enables simplified, automatic system operation without user intervention.

Audio de-embedding

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

Specifications

Video		
Signal	Input - HDMI, USB-C Output - HDMI	
Copy Protection	HDCP 2.2	
Pixel Clock	600 MHz	
UHD/HD/SD	4096x2160@60/50/30/25/24 Hz 3840x2160@60/50/30/25/24 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 60Hz	2560x1600 2048x1536 1920x1200 1680x1050 1600x1200 1440x900 1400x1050 1280x1024	1280x800 1366x768 1360x768 1152x864 1024x768 800x600 640x480
Scaler ⁽²⁾	IN	OUT
	4K@24 Hz 4K@30 Hz 4K@60 Hz	1080p@24 Hz 1080p@30 Hz 1080p@60 Hz
Color Space	YUV, RGB	
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0 ⁽³⁾	
Color Depth	8-bit, 10-bit, 12-bit	
HDR	HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60 Hz	

Audio			
HDMI Pass-Through Formats	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD	DTS® Digital Surround™ DTS-HD Master Audio™
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		
Impedance	150 Ω		
Stereo channel separation	> 90 dB		
THD + N	< 0.004% @ 20 Hz to 20 kHz		
SNR	> 94 dB @ 1 kHz, zero clipping @ 0 dBFS, unweighted		

USB	
Compliance	3.0
Maximum Data Rate	5 Gbps ⁽⁴⁾
USB-C	Supports audio, video, device and host data, and up to 60 W power charging
Internal Hubs	1 USB hub (when connected to USB-C or USB type B host port)
Power	4.5 W / 900 mA per Type-A port

Ethernet	
Port	1 x RJ45
Standards and Protocols	HTTP, HTTPS, Telnet, SSH, mDNS
Speeds	10/100 Mbps
Addressing	DHCP, Static – selectable through front panel, IP, RS-232 commands, and built-in web server

RS-232	
Port	1 x 4-pin captive screw; TX, RX, GND
Use	Device control and configuration
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Data flow	Bidirectional

IR	
Port	1 x 4-pin captive screw; TX, GND
Use	Pass-through control
Frequency Range	30 kHz to 60 kHz

CEC	
Port	1 x HDMI OUTPUT, Type A, 19-pin female
Triggering	Through IP, RS-232, and built-in web server

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
USB-C ⁽⁴⁾	6.6	2	6.6	2

Buttons and Indicators	
Buttons: DISPLAY, INPUT IP MODE, RESET	2 – momentary, tact-type 2 – momentary, tact-type
Indicators: PWR, INPUT IP MODE, RESET	3 – LED, green 2 – LED, green

Connectors	
HDMI IN	1 – Type A, 19-pin 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
USB HUB	2 – Type A, 4-pin female
USB HOST	1 – Type B, female
AUDIO OUT	1 – 5-pin captive screw, balanced / unbalanced 2-channel
RS-232 / IR OUT	1 – 4-pin captive screw (bidirectional)
LAN	1 – RJ45, 100Base-T
PWR	1 - 4-pin mini-DIN

Environmental	Fahrenheit	Celsius
Operating Temperature	+32 to +122	0 to +50
Storage Temperature	-4 to +140	-20 to +60
Operating Humidity (RH)	20% to 90%, non-condensing	
Maximum Operating Altitude	2000 meters	

Power	
Consumption	Unit only: 6.0 W Full load: 90.4 W (while powering USB-C devices up to 60 W and USB Type A devices up to 9 W total across all ports)
External Power Supply	100 - 240 V AC, 50/60 Hz Output: 24 V / 5 A DC

Dimensions (H x W x D)	Inches	Millimeters
Unit	1.02 x 8.62 x 5.98	26 x 219 x 152
Power Supply (AT-PS-245-D4)	1.59 x 2.63 x 6.17	41 x 67 x 157

Weight	Pounds	Kilograms
Device	2.15	0.975

Certification	
Device	CE, FCC, CB
Power Supply	CE, FCC, UL, CB

Compliance	
NDAA-899	Yes

Warranty	
3 years	View the full warranty information here: https://atlon.com/warranty

Footnotes

- (1) The cable used for USB-C connection should support at least USB 3.1 Gen. 1, 4K @ 60 Hz video, and 60 W of power delivery.
- (2) Scaler does not support frame rate conversion.
- (3) 4:2:0 is not supported over USB-C.
- (4) When USB SuperSpeed (SS) mode is enabled, video output is supported up to 4K @ 30 Hz and the USB data rate is 5 Gbps. If disabled, video output is supported up to 4K @ 60 Hz and data rate is limited to 480 Mbps.

Accessories

SKU	Description
AT-LC-H2H-1M	LinkConnect HDMI to HDMI 1 Meter Cable
AT-LC-H2H-2M	LinkConnect HDMI to HDMI 2 Meter Cable
AT-LC-H2H-3M	LinkConnect HDMI to HDMI 3 Meter Cable
AT-LC-UC2UC-2M	LinkConnect USB-C to USB-C 2 Meter Cable

Copyright, Trademark, and Registration

© 2024 Atlona Inc. All rights reserved. "Atlona" and the Atlona logo are registered trademarks of Atlona Inc. Pricing, specifications and availability subject to change without notice. Actual products, product images, and online product images may vary from images shown here.



The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.



Dolby, Dolby Atmos, and the double-D symbol are registered trademarks of Dolby Laboratories Licensing Corporation.



For DTS patents, see <http://patents.dts.com>. Manufactured under license from DTS, Inc. DTS, the Symbol, DTS and the Symbol together, and Digital Surround are registered trademarks and/or trademarks of DTS, Inc. in the United States and/or other countries. © DTS, Inc. All Rights Reserved.

All other trademark(s), copyright(s), and registered technologies mentioned in this document are the properties of their respective owner(s).