Omega™

4K/UHD 6x2 Matrix Switcher

for HDMI, USB-C, and HDBaseT with USB

Introduction

The Atlona **AT-OME-PS62** is a 6x2 matrix presentation switcher with HDMI, USB-C, and HDBaseT inputs, plus HDMI and HDBaseT outputs. Part of the Omega™ Series of integration products for modern AV communications and collaboration, the OME-PS62 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). The HDMI and USB-C ports support video up to UHD/60 4:4:4. The OME-PS62 is HDCP 2.2 compliant and features 4K/60 4:4:4 upscaling and downscaling for the HDMI output. 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-PS62 includes USB 3.0 and USB-C interfaces for three host PCs, plus two peripheral devices such as a camera, microphone, speaker phone, or keyboard and mouse. The OME-PS62 is ideal for a wide range of 4K presentation applications with Omega Series transmitters and receivers.

Applications

- **Meeting rooms and conference rooms**
  The OME-PS62 can serve as an AV integration centerpiece in a credenza, with interfacing into sources in the rack, plus remote AV and USB connectivity from wall, table, and display locations.
- **Video conferencing and USB data**
  With compatible Omega Series endpoints, this presentation 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 scaling, the OME-PS62 is also ideal for hardware-based video conferencing, with the ability to route and optimize any source content to the codec far-end.
- **Auditoriums and lecture halls**
  The HDBaseT output of the OME-PS62 can be used to extend 4K video to a projector, while the HDMI output serves to optimize for a 1080p or 4K confidence monitor. Also available is a microphone input and mixing with program audio.
- **Active learning classrooms**
  In education applications, the OME-PS62 can be installed below each student table, with the HDMI output feeding a local display, and the HDBaseT output used to send content to the main classroom AV switcher and display.
- **Lecture capture**
  The secondary, HDMI output can also be used to feed into a lecture capture or streaming video system, with video scaled as appropriate for the application.

Key Features

6×2 AV matrix switcher with HDBaseT, HDMI, and USB-C inputs

- Features two HDBaseT and three HDMI inputs, plus a USB-C input.
- Delivers flexible BYOD capability, as well as integration versatility for local and remote AV sources.

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

- Enables simple configuration and effortless user operation, tailored to the specific AV application.
- Three selectable switching modes, including mirrored HDMI and HDBaseT outputs, matrixed outputs (default), and a special mode with one input fixed to one of the outputs.

4K/UHD downscaling and upscaling for HDMI output

- Preserves color and spatial detail when down-converting 4K content to 1080p or vice versa. Ideal for presentation applications where content is to be viewed on 4K and HD displays.
- Also ideal for downscaling to 1080p for hardware video conferencing codecs and lecture capture systems.

USB 3.0 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 peripheral devices such as cameras, soundbars, or touch displays. 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.

Comprehensive audio integration features

- Audio embedding and de-embedding, microphone/line level input with 48 volt phantom power and automatic ducking, audio output matrix mixing, and volume, mute, and five-band EQ for each output.
- Integrated audio processing and optimization features without the need for additional equipment.

Power over Ethernet (PoE) for transmitters and receivers

- Supplies industry standard IEEE 802.3af PoE over HDBaseT to Omega Series and other compatible transmitters and receivers.
- Allows convenient endpoint installation at remote locations without the need for local AC power.

Display control

- Supports CEC and bidirectional RS-232 to control local and remote displays.
- Bidirectional conversion of control data from TCP/IP to and from RS-232.

Specifications

Video		
Signal Type	Input: HDMI and DisplayPort Alternate Mode (USB-C)	
	Output: HDMI and HDBaseT	
Copy Protection	HDCP 2.2 / 1.4	
Pixel Clock	300MHz	
UHD/HD/SD	4096x2160@60[1]/50/30/25/24Hz 3840×2160@60[1]/50/30/25/24Hz 1080p@60/59.9/50/30/29.97/25/24/23.98Hz 1080i@30/29.97/25Hz	720p@60/59.94/50Hz 576p@50Hz 576i@25Hz 480p@60/59.96Hz 480i@30Hz
VESA All resolutions are 60Hz	2560×1600 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480
Scaler Up/Down	4096x2160p60 4096x2160p50 4096x2160p30 4096x2160p25 4096x2160p24 3840x2160p60 3840x2160p50 3840x2160p30 3840x2160p25 3840x2160p24 1920x1080p60 (default) 1920x1080p50	1920x1080p25 1920x1080p24 1280x720p60 1280x720p50 2048x1080 1920x1200 1600x1200 1360x768 1280x800 1280x768 1024x768
Color Space	YUV, RGB	
Chroma Subsampling	HDMI and HDBaseT: 4:4:4, 4:2:2, 4:2:0 USB-C: 4:4:4 only	
Color Depth	8-bit, 10-bit, 12-bit	
HDR	HDR10, Hybrid-Log Gamma (HLG), and Dolby® Vision™ @ 60Hz; HDMI and USB-C ports only	

Audio			
HDMI / HDBaseT Inputs	PCM 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®
HDMI / HDBaseT Outputs	PCM 2.0	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD Dolby Atmos®	DTS® Digital Surround™ DTS-HD Master Audio™ DTS:X®
Bit Depth	24 bits		
Analog Audio			
Format	Stereo 2-Channel		
Balanced Output	+4 dBu nominal gain, +20 dB headroom		
Frequency Response	20 Hz to 20 kHz, ± 0.5 dB		
Impedance	150 Ω		
Stereo channel separation	> 90 dB		
THD+N	< 0.004% at 20 Hz to 20 kHz		
SNR	> 103.7 dB at 1 kHz, zero clipping @ 0 dBFS, unweighted		
EQ	5 band, 63Hz, 85Hz, 250Hz, 1kHz, 4kHz		
MIC			
Phantom Power	48V, enable and disable through webGUI / 3-pin MIC option		
Ducking	Selectable on/off		
Trigger level	Selectable, -60 to -10 dB		
Attack Time	Selectable, 1 to 5000 ms		
Release Time	Selectable, 1 to 5000 ms		
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		

USB	
Compliance	Local - 3.0 HDBaseT - 2.0
Maximum Data Rate	120 Mbps
USB-C	Supports Audio, Video, and device & host data
Internal Hubs	1 USB hub when connected to USB type B host port, 2 cascaded USB hubs when connected to USB-C port

Ethernet	
Port	1 x RJ45
Standards and Protocols	HTTPS, Telnet, mDNS, SSL, IEEE 802.1x
Speeds	10/100/1000 Mbps
Addressing	DHCP, Static – selectable through rear panel, IP & RS-232 commands, and built-in web server

RS-232	
Port	2 x 3-pin captive screw
Use	Unit and external device control and configuration
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Data flow	Bi-directional

CEC	
Port	HDMI, 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
CAT5e	295	90	330	100
CAT6/6a/7	330	100	330	100

Buttons and Indicators	
Control Buttons: MENU, NAV, and NUMBER IP MODE and RESET	 10 - momentary, tact-type 2 - momentary, recessed
Input Indicators: IP MODE, RESET	 2 - LED, green

Connectors	
HDMI IN	3 - Type A, 19-pin female
HDBaseT IN	2 - RJ45, 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(2)	1 - RJ45, female
USB HUB	2 - Type A, 4-pin female
USB HOST	2 - Type B, female
LINE/MIC IN	1 - 6-pin captive screw, balanced / unbalanced line level input w/3-pin MIC option
LINE/MIC Switch	1 - 3 position switch - MIC, 48V, and LINE
AUDIO IN	2 - 5-pin captive screw, balanced / unbalanced 2-channel
AUDIO OUT	2 - 5-pin captive screw, balanced / unbalanced 2-channel
RS-232	2 - 3-pin captive screw (bidirectional)
LAN	2 - RJ45, 100Base-T
PWR	1 - Internal 100-240 VAC 50/60Hz, IEC female connector

Temperature	Fahrenheit	Celsius
Operating	32 to 122	0 to 50
Storage	-4 to 140	-20 to 60
Humidity (RH)	20% to 60%, non-condensing	

Power	
Consumption	**Unit only:** 58W **Full load:** 170W (while powering USB-C device up to 60W, HDBaseT PoE devices up 15W each, and USB type A devices up to 2.5W each)
Supply	100-240 VAC, 50/60Hz

Dimensions	Inches	Millimeters
H x W x D	1.73 x 17.24 x 10	44 x 438 x 254

Weight	Pounds	Kilograms
Device	7.76	3.52

Certification		
Device	CE, FCC, UL	

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

Footnotes

(1) 4K/UHD @ 60 Hz only supports 4:2:0.
(2) Maximum limit of 6 USB hubs when traversing an HDBaseT link.

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