

AT-OME2-E2321-WP
Specification Sheet

Omega 2 HDBaseT 3 2x1 Video Switcher Wall Plate with HDMI and USB-C | 70m

Description

The AT-OME2-E2321-WP is an Omega 2 2x1 wall plate switcher and HDBaseT 3.0 transmitter with USB-C and HDMI inputs, designed for a US two-gang opening in a wall or table. It sends fully uncompressed video — 4K@60Hz 4:4:4 8-bit SDR or 4K@60Hz 4:2:2 12-bit HDR — together with audio, USB 2.0 data, and control over a single category cable to the AT-OME2-D2311 receiver, up to 230 feet (70 meters) at 4K@60Hz 4:2:0 and 131 feet (40 meters) at 4K@60Hz 4:4:4 over Cat 6A. The full-featured USB-C input carries video, USB data, and up to 60 W of laptop charging when an optional 20 V power supply is connected; the HDMI input is paired with a USB Type-B HOST port for a room PC or laptop. Inputs switch automatically on connection or with the front-panel INPUT button or API commands, and a DISPLAY button turns the display on and off over CEC. An analog AUDIO IN passes independent audio to the receiver. The wall plate is powered by PoH from the receiver, so no local power supply is needed for presentation use.

Applications

Conference Rooms

- Table or wall connection point for BYOD laptops over USB-C or HDMI, with USB to room cameras and speakerphones.

Huddle Spaces

- One-cable USB-C presentation with laptop charging, powered from the display end of the room.

Classrooms and Training Rooms

- Wall-mounted input at the lectern that switches automatically between instructor devices.

Boardrooms

- Discreet two-gang presentation input with one-touch display on/off.

Key Features

- 2x1 wall plate switcher and HDBaseT 3.0 transmitter with USB-C and HDMI + USB Type-B inputs.

- Uncompressed 4K@60Hz 4:4:4 8-bit SDR and 4K@60Hz 4:2:2 12-bit HDR; HDCP 2.2.
- Up to 230 ft (70 m) at 4K@60Hz 4:2:0 and 131 ft (40 m) at 4K@60Hz 4:4:4 over Cat 6A.
- Full-featured USB-C input: video, USB 2.0 data, and up to 60 W charging (with optional 20 V power supply).
- High-speed USB 2.0 pass-through at up to 480 Mbps.
- Automatic (last-connected) switching plus manual switching by INPUT button or API commands.
- DISPLAY button turns the connected display on or off over CEC.
- Analog AUDIO IN for independent audio distribution to the receiver.
- RS-232 port for API control, command pass-through, and firmware update.
- PoH powered from the receiver — no local power supply required except for USB-C charging.
- US two-gang wall plate form factor; faceplate cover included.
- Pairs with the AT-OME2-D2311 Omega 2 HDBaseT 3 Video Receiver.

Specifications

Video	
Inputs	1× HDMI; 1× USB-C (DisplayPort Alt Mode)
Output	1× HDBaseT 3.0
HDMI Input	HDMI 2.0; up to 4K@60Hz 4:4:4 8-bit; HDCP 2.2
USB-C Input	Up to 4K@60Hz 4:4:4 8-bit; HDCP 2.2
Maximum Data Rate	18 Gbps
HDR	4K@60Hz 4:2:2 12-bit
UHD / HD Resolutions	4096 × 2160 @ 24, 30, 50, 59.94, 60 Hz (4:4:4) 3840 × 2160 @ 24, 30, 60 Hz (4:4:4) 1920 × 1080p @ 60 Hz
VESA Resolutions	2560 × 1600, 2560 × 1440, 1920 × 1200, 1680 × 1050, 1600 × 1200, 1600 × 900, 1440 × 900, 1366 × 768, 1360 × 768, 1280 × 1024, 1280 × 960, 1280 × 800, 1280 × 768, 1280 × 720, 1024 × 768, 800 × 600 — all @ 60 Hz

Switching	
Automatic	Last-connected input is selected; if the selected source is removed, switches to the other connected input (detects 5 V)
Manual	Front-panel INPUT button or RS-232 API commands

Audio	
HDMI / USB-C Formats	PCM 2.0 / 5.1 / 7.1, Dolby® TrueHD, Dolby Atmos®, DTS-HD® Master Audio™, DTS:X®
AUDIO IN (Pass-Through)	Analog stereo, passed through to the receiver

USB	
Standard	USB 2.0
Data Rate	USB 2.0, 480 Mbps standard; up to 350 Mbps data transfer over HDBaseT
USB-C Input	USB data, video, and charging up to 60 W (requires optional 20 V, 6 A power supply)
USB HOST	1× USB Type-B; linked to the HDMI input

Control	
Front Panel	INPUT button (select HDMI or USB-C); DISPLAY button (press: display on; hold 3 s: display off, via CEC)
RS-232	API control, command pass-through, and MCU firmware update; 115200 bps, 8 data bits, no parity, 1 stop bit

Connectors	
VIDEO IN	1× HDMI Type A, 19-pin female
USB-C IN	1× USB Type-C
HOST	1× USB Type-B
AUDIO IN	1× 3.5 mm stereo jack
HDBaseT OUT	1× RJ45 (rear)
RS-232	1× 3-pin captive screw (3.5 mm, rear)
Power	1× 2-pin captive screw (3.5 mm, rear), DC 20 V input

Indicators	
VIDEO	On: HDMI input selected
USB-C	On: USB-C input selected
LINK	On: HDBaseT link established; off: no link or link error
PWR	On: powered

Cable	Maximum Distance	Supported Video
Cat 6A/7 (U/FTP, F/FTP, or S/FTP)	230 ft (70 m)	4K@60Hz 4:2:0 8-bit, 4K@30Hz, 1080p@60Hz
Cat 6A/7 (U/FTP, F/FTP, or S/FTP)	131 ft (40 m)	4K@60Hz 4:4:4 8-bit; 4K@60Hz 4:2:2 12-bit; 4K@60Hz 4:2:0 12-bit
Cat 5e/6	197 ft (60 m)	4K@60Hz 4:2:0 8-bit, 4K@30Hz, 1080p@60Hz
Cat 5e/6	131 ft (40 m)	4K@60Hz 4:4:4 8-bit; 4K@60Hz 4:2:2 12-bit; 4K@60Hz 4:2:0 12-bit
Cat 6A/7, with patch cables	230 ft (70 m) / 131 ft (40 m)	Same formats as without patch cables
Cat 5e/6, with patch cables	197 ft (60 m) / 100 ft (30 m)	4K@60Hz 4:2:0 8-bit, 4K@30Hz, 1080p@60Hz / 4K@60Hz 4:4:4 and 12-bit formats

Use straight-through T568B category cable; Cat 6A U/FTP, F/FTP, or S/FTP is recommended for full HDMI 2.0 resolutions. Up to two patch cables, each no longer than 16 ft (5 m), may be used — one at each end of the link.

Power	
Input	PoH from the AT-OME2-D2311 receiver; optional DC 20 V, 6 A power supply (sold separately) required for USB-C charging
Consumption	6.6 W max. without USB-C charging; 71.6 W max. with USB-C charging

Environmental		
Operating Temperature	+32° to +113°F	0° to +45°C
Storage Temperature	-4° to +158°F	-20° to +70°C
Humidity (RH)	10% to 90%, non-condensing	
ESD Protection (Human-Body Model)	±8 kV air-gap discharge	±4 kV contact discharge

Dimensions (W × H × D)		
Unit	3.50 × 4.16 × 1.43 in.	89 × 105.6 × 36.25 mm

Weight		
Device	0.79 lbs	0.36 kg

Package Contents	
Included	1× AT-OME2-E2321-WP wall plate transmitter 1× US two-gang faceplate cover with 4 screws 1× USB 2.0 Type-A to Type-B cable, 4.9 ft (1.5 m) 1× 3-pin captive screw connector (3.5 mm) 1× 2-pin captive screw connector (3.5 mm) 4× mounting screws

Certifications	
Regulatory	FCC, CE, RoHS

Warranty	
Device	To view the product warranty, visit: hallresearch.com/warranty

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