

AT-OME2-R2742
Specification Sheet

Omega 2 HDBaseT 3 4x2 Video Switcher with Dante® Audio | 100m

Description

The AT-OME2-R2742 is an Omega 2 4x2 conference room switcher that brings video, audio, USB, control, and network connectivity together in one unit. Two HDMI inputs, each paired with a USB 3.2 Type-B host port, and two full-featured USB-C inputs accept laptops and room PCs; the USB-C inputs carry 4K video, up to 10 Gbps USB data, a 1 Gbps network connection, and up to 100 W charging, and USB-C input 4 optionally supports MST for dual-display content from a single laptop, along with USB data and up to 100 W charging. Two HDMI outputs, one mirrored to an HDBaseT 3.0 output that reaches 330 feet (100 meters) at 4K@60Hz, drive local and remote displays. Four USB 3.2 DEVICE ports connect cameras, speakerphones, and other conference peripherals, and USB is also extended over HDBaseT to the AT-OME2-D2311 receiver at speeds up to 480 Mbps via USB 2.0. Audio from HDMI, USB, or the 2x2 Dante® network interface can be routed to the balanced AUDIO OUT, the USB audio output, or to Dante devices. Automatic switching (last-in or priority), front-panel buttons, CEC and RS-232 display control, relay, trigger, and occupancy sensor ports, plus a Web UI and API over RS-232 or Telnet, make the AT-OME2-R2742 easy to integrate. Two independent Ethernet ports support VLAN separation of the device and guest USB networks, with IEEE 802.1X authentication.

Applications

Medium and Large Conference Rooms

- Switch BYOD laptops and a room PC to a local display and a remote display up to 100 m away, with shared USB camera and speakerphone.

Dual-Display Meeting Spaces

- Present two independent screens from one USB-C laptop using MST, or route sources to each display in matrix mode.

Huddle and Collaboration Rooms

- Single-cable USB-C connection for video, USB, network, and up to 100 W laptop charging at the table.

Dante Audio Installations

- Bring conference audio into a Dante network for DSPs, amplifiers, and ceiling microphones.

Key Features

- 4x2 conference presentation switcher integrating video, audio, USB, control, and Ethernet.
- 2× HDMI 2.0 inputs, each paired with a USB 3.2 Type-B host port; 2× full-featured USB-C inputs; locking-cable support on all input ports.
- USB-C inputs: DisplayPort Alt Mode up to 4K@60Hz, USB 3.2 Gen 2x1 data up to 10 Gbps, 1 Gbps USB Ethernet, and up to 100 W PD 3.0 charging.
- Configurable USB-C power delivery from a 120 W budget — 100 W to a single USB-C laptop, 60 W to each of two, or Auto (100 W until a second laptop connects, then 60 W per input).
- USB-C input 4 supports MST — two 4K video signals to the two outputs from a single laptop.
- 2× HDMI outputs plus an HDBaseT 3.0 output (mirrors HDMI OUT 2) — up to 330 ft (100 m) at 4K@60Hz, with USB 2.0, over Cat 6A.
- HDMI 2.0 up to 4K@60Hz 4:4:4 8-bit or 4K@60Hz 4:2:2 12-bit; HDCP 2.2/1.4; HDR10, HLG, HDR10+, and Dolby Vision.
- 4× USB 3.2 DEVICE ports (5 V, 1.5 A each) for cameras, speakerphones, and other conference devices; USB extension over HDBaseT.
- Front-panel USB charging port (5 V, 2 A) for auxiliary devices.
- Balanced stereo AUDIO OUT; audio de-embedding, USB audio (UAC), and 2x2 Dante® audio with optional embedding into the HDMI outputs.
- Automatic switching (LIFO or Priority), independent or follow-video USB switching, and front-panel buttons.
- Per-output down-scaler (Auto / Forced 1080p / Off) and EDID management with custom EDID upload.
- CEC and RS-232 display on/off with automatic display control; 2× RS-232, 2× relay, trigger, and 24 V occupancy sensor ports.
- 2× independent Ethernet ports with VLAN separation, allowing a dedicated network for Ethernet over USB; IEEE 802.1X; HTTP/HTTPS.
- Web UI, Telnet, and RS-232 API control; TCP-to-RS-232 routing.

Specifications

Video	
Inputs	2× HDMI; 2× USB-C (DisplayPort Alt Mode)
Outputs	2× HDMI; 1× HDBaseT 3.0 (mirrors HDMI OUT 2)
HDMI	HDMI 2.0; up to 4K@60Hz 4:4:4 8-bit or 4K@60Hz 4:2:2 12-bit
Copy Protection	HDCP 2.2 / 1.4
Maximum Data Rate	HDMI: 18 Gbps; USB-C: 10 Gbps per lane
USB-C IN 3	DisplayPort Alt Mode, SST — one output up to 4K@60Hz
USB-C IN 4	DisplayPort Alt Mode, MST (optional) — two outputs up to 4K@60Hz each
CTA Resolutions	1280 × 720p @ 50, 60 Hz 1920 × 1080p, 3840 × 2160, 4096 × 2160 @ 24, 25, 30, 48, 50, 60 Hz
VESA Resolutions	800 × 600, 1024 × 768, 1280 × 768, 1280 × 800, 1280 × 960, 1280 × 1024, 1360 × 768, 1366 × 768, 1440 × 900, 1600 × 900, 1600 × 1200, 1680 × 1050, 1920 × 1200, 2048 × 1152, 2560 × 1440, 3440 × 1440 — all @ 60 Hz
HDR	HDR10, HLG, HDR10+, Dolby Vision
Down-Scaler	Per output: Auto (4K to 1080p for 1080p displays), Forced 1080p, or Off
EDID	Per input; default Fixed 4K@60Hz 2.0ch; custom EDID upload and output EDID read

Switching	
Automatic	LIFO (default) or Priority mode; enable/disable in Web UI or API
Manual	Front-panel OUT 1, OUT 2, and AUDIO buttons; Web UI; API
USB Switching	Follow VIDEO OUT 1 (default), follow VIDEO OUT 2, or independent

Audio	
HDMI / USB-C Formats	Up to 7.1 ch: PCM 2.0 / 5.1 / 7.1, Dolby® Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos®, DTS® 5.1, DTS-HD® Master Audio™, DTS:X®
AUDIO OUT	Balanced stereo; de-embedded from HDMI OUT 1 or OUT 2, USB audio, or Dante
Dante®	2x2 channels, stereo; optional embedding into HDMI OUT 1/2 and routing to USB host audio
USB Audio	UAC (USB Audio Class); conference audio can be routed to the USB host audio output
Mute	Per output, via Web UI or API

USB	
USB HOST 1 & 2	USB 3.2 Gen 2x1 Type-B, up to 10 Gbps; bound to HDMI IN 1 and HDMI IN 2
USB-C IN 3 & 4	USB 3.2 Gen 2x1, up to 10 Gbps; PD 3.0 charging from a 120 W total budget — 100 W to one input (no charging on the other), 60 W to both, or Auto (100 W until a second USB-C source connects, then 60 W per input)
USB DEVICE	4× USB 3.2 Gen 2x1 Type-A, up to 10 Gbps; 5 V, 1.5 A per port
CHARGING	1× USB 2.0 Type-A, 5 V, 2 A (charge only)
USB over HDBaseT	USB 2.0 extension to the AT-OME2-D2311 receiver, up to 480 Mbps
USB Network Adapter	One configurable USB Ethernet adapter, shared across all host connections; up to 1 Gbps

Control	
Methods	Front-panel buttons, RS-232, LAN (Web UI and Telnet)
RS-232	2× RS-232 ports: API control, 3rd-party device control, and TCP-to-RS-232 routing; 115200 bps, 8 data bits, no parity, 1 stop bit
Display Control	CEC and RS-232 display on/off, with automatic control on source connect/disconnect and adjustable off delay
RELAY	2× relay; latch or momentary (1–30 s)
TRIGGER	4 configurable input/output pins, each settable as input or output with pull-up resistor and high/low state; 5 V supply
SENSOR	Occupancy sensor input with switchable 24 V output
TCP-to-RS-232 Ports	9001 (RS-232 1), 9002 (RS-232 2), 9003 (RS-232 over HDBaseT)

Network	
LAN 1 (Secure) & LAN 2	2× RJ45, 1000/100 Mbps auto-sensing
VLAN	Transparent or Separated (device network isolated from USB network adapters; Web UI on LAN 1 only)
Security	IEEE 802.1X (EAP-TLS, EAP-MSCHAPv2); HTTPS (always on); HTTP (optional)
Addressing	DHCP (default) or static
Telnet	Port 23
Dante	1× RJ45, dedicated Dante audio port

Connectors	
HDMI IN 1 & 2	2× HDMI Type A, 19-pin female, locking
USB HOST 1 & 2	2× USB 3.2 Type-B
USB-C IN 3 & 4	2× USB Type-C, locking
CHARGING	1× USB 2.0 Type-A (front)
HDMI OUT 1 & 2	2× HDMI Type A, 19-pin female, locking
HDBaseT	1× RJ45

Connectors	
USB DEVICE	4× USB 3.2 Type-A
AUDIO OUT	1× 5-pin captive screw (3.5 mm)
RS-232	2× 3-pin captive screw (3.5 mm), double-layer
TRIGGER	1× 6-pin captive screw (3.5 mm)
RELAY	2× 3-pin captive screw (3.5 mm), double-layer; NO / C / NC
SENSOR	1× 3-pin captive screw (3.5 mm)
LAN	2× RJ45
Dante	1× RJ45
FW	1× Micro-USB (firmware update)
RESET	1× recessed button: 5 s = reset IP mode (DHCP) and password; 15 s = factory defaults
Power	1× DC 20 V input

Port / Cable	Maximum Distance	Supported Video
HDBaseT — Cat 6A/7 (U/FTP, F/FTP, or S/FTP)	330 ft (100 m)	All formats: 4K@60Hz, 4K@30Hz, 1080p@60Hz
HDBaseT — Cat 5e/6	230 ft (70 m)	4K@60Hz 4:2:0 8-bit; 4K@30Hz and 1080p@60Hz (all)
HDBaseT — Cat 5e/6	131 ft (40 m)	4K@60Hz 4:4:4 8-bit; 4K@60Hz 4:2:2 12-bit
USB-C — USB-C to USB-C cable	7 ft (2 m)	All formats up to 4K@60Hz
HDMI in/out — HDMI cable	33 ft (10 m)	4K@60Hz 4:2:0 8-bit; 4K@30Hz and 1080p@60Hz (all)
HDMI in/out — HDMI cable	16 ft (5 m)	4K@60Hz 4:4:4 8-bit; 4K@60Hz 4:2:2 12-bit

Use straight-through T568B, F/FTP or U/FTP category cable for HDBaseT; do not use UTP, F/UTP, or U/UTP cable.

Power	
Input	DC 20 V, 10 A (power supply included)
USB-C Power Delivery	120 W total across the two USB-C inputs
Consumption	13.1 W max. without USB and charging loads; 155.6 W max. with USB and 60 W USB-C charging loads

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 (without mounting brackets)	12.80 × 0.98 × 7.09 in.	325 × 25 × 180.2 mm

Weight		
Device	3.20 lbs	1.45 kg

Package Contents	
Included	1× AT-OME2-R2742 switcher 1× DC 20 V, 10 A power supply 1× AC power cord, regional pins 2× USB 3.2 Type-C to Type-C cable, 6.6 ft (2 m) 2× USB 3.0 Type-A to Type-B cable, 5.9 ft (1.8 m) 1× 3-pin captive screw connector (3.5 mm) 2× 3-pin captive screw connectors, double-layer (3.5 mm) 1× 5-pin captive screw connector (3.5 mm) 1× 6-pin captive screw connector (3.5 mm) 4× mounting brackets with screws

Certifications	
Regulatory	FCC, CE, UKCA, RoHS

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

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