



Introduction

The Atlona AT-OME-RX21 is an HDBaseT receiver and 4K/UHD scaler with a local HDMI input. Part of the Omega™ Series of integration products for modern AV communications and collaboration, the OME-RX21 receives HDBaseT for video up to 4K/60 4:2:0, plus embedded audio, control, and Ethernet over distances up to 330 feet (100 meters). The HDMI input supports video up to UHD/60 4:4:4. The OME-RX21 is HDCP 2.2 compliant and features 4K/60 upscaling and downscaling with frame rate conversion. The OME-RX21 is ideal for 4K presentation applications with Omega, HDVS-200, or UHD-EX Series transmitters, as well as Atlona AV presentation switchers with HDBaseT outputs, local HDMI sources, and the Gain™ Series amplifiers. Also available is the AT-OME-RX21-KIT which includes the AT-HDVS-200-TX HDMI and VGA switching transmitter.

The OME-RX21 combines the benefits of 4K/UHD scaling, auto-switching for HDBaseT and HDMI inputs, integrated display control, and more. It incorporates many popular integration convenience features, while delivering excellent performance and value for 4K presentation and video conferencing applications. The OME-RX21 can remotely power an Atlona HDBaseT transmitter through Power over Ethernet (PoE). For additional integration convenience, the OME-RX21 features audio de-embedding, integrated two-port Ethernet switch, contact closure ports for controlling a motorized screen or display lift, internal video test patterns for setup and troubleshooting, and remote management with AMS (Atlona Management System).

Applications

- Complete system integration**
 The OME-RX21 and an HDVS-200 or Omega Series switcher / transmitter provide a compact, yet comprehensive and cost-effective system solution for small meeting spaces.
- Larger system applications**
 The OME-RX21 is ideal for extending AV and control, from a switcher in an equipment rack to a remote display. Built-in 4K scaling optimizes content for 4K and HD displays.

Key Features

HDBaseT receiver with local HDMI input

- Two-input switcher with HDBaseT and HDMI inputs.
- HDMI input is ideal for a wireless gateway, PC, video conferencing codec, or media player installed near a display.

Video, audio, power, and data over category cable utilizing HDBaseT technology

- Receives up to 330 feet (100 meters) @ 1080p with CAT5e/6 or 4K/UHD using CAT6a/7 cable.
- Uses easy-to-integrate category cable for low-cost, reliable system installation.

4K/UHD downscaling and upscaling

- 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 a variety of 4K and HD displays, including a confidence monitor.

Local AC powering – PoE (Power over Ethernet) source

- Supplies industry standard PoE over HDBaseT to an Omega™ or HDVS-200 Series transmitter.
- Allows convenient transmitter installation at any remote location, without the need for local AC power.

Automatic input selection and automatic display control

- Automatically changes display power state, and switches between inputs based on device connection or disconnection from the switcher.
- Enables effortless, automated system operation without the need for an external control system.

Audio de-embedding

- De-embeds two channel PCM audio from any video source to a balanced, analog audio output.
- Independent volume and mute controls for embedded and de-embedded two-channel PCM audio, plus five-band EQ for the analog audio output.

Dual Ethernet ports and integrated network switch

- Allows a single connection to an AV LAN for IP control of a display and the OME-RX21 (plus transmitter or switcher over HDBaseT).
- Simplify system design and integration with just one network drop for AV system control.

Contact closure for screen or display lift control

- Dry contact closure triggers electronic screen or lift operation based on active or standby mode of the switcher / scaler.
- Automates screen or lift activation at system power-up; eliminates need for a separate AV control system.

Specifications

Video	
HDMI	2.0
HDCP	2.2
UHD/HD/SD	4096x2160@60 ⁽¹⁾ /50/30/25/24Hz, 3840x2160@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	2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1440x900, 1400x1050, 1280x1024, 1280x800, 1366x768, 1360x768, 1152x864, 1024x768, 800x600, 640x480

Video	
Scaler Up/Down	1024x768p60, 1280x720p50, 1280x720p60, 1280x768p60, 1280x800p60, 1360x768p60, 1600x1200p60, 1920x1080p24, 1920x1080p25, 1920x1080p50, 1920x1080p60, 1920x1200p60, 2048x1080p60, 3840x2160p24, 3840x2160p25, 3840x2160p30, 3840x2160p50, 3840x2160p60, 4096x2160p24, 4096x2160p25, 4096x2160p30, 4096x2160p50, 4096x2160p60
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Color Depth	8-bit, 10-bit, 12-bit

Audio	
HDMI Pass-Through Formats	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™, and DTS:X®
Bit Rate	24 Mbits/s max
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	< 0.03% at 20 Hz to 20 kHz
SNR	> 90 dB at 1 kHz, zero clipping @ 0 dBFS, unweighted
EQ	5 band, 63Hz, 85Hz, 250Hz, 1kHz, 4kHz
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz

Control	
RS-232	1-way connected display control 2-way device control and monitoring Supported baud rates: 2400, 4800, 9600, 19200, 38400, 57600, 115200
CEC Support	Yes
Relay	Normally open (NO), adjustable Toggle and Pulse modes Electrical rating: 48V@1A

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

Connectors, Controls, and Indicators	
HDMI IN	1 - Type A, 19-pin female
HDBaseT IN	1 - RJ45, female
HDMI OUT	1 - Type A, 19-pin female
AUDIO OUT	1 - 5-pin captive screw, balanced / unbalanced 2-channel
RELAY	1 - 3-pin captive screw
RS-232	2 - 3-pin captive screw (bidirectional)
LAN	2 - RJ45, 100Base-T
DC 24V	1 - 4-pin, mini-DIN locking connector
PWR indicator	1 - LED, green
LINK indicator	1 - LED, yellow
Control Buttons: DEVICE IP, INPUT, PATTERN IP MODE, RESET	3 - momentary, tact-type 2 - momentary, recessed
Function Indicators: IP MODE, RESET	2 - LED, green

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	TBD W
Supply	Input: 100 - 240 V AC, 50/60 Hz Output: 24 V / 2.7A DC

Dimensions	Inches	Millimeters
H x W x D	1.02 x 8.62 x 5.98	26 x 219 x 152

Weight	Pounds	Kilograms
Device	1.96	0.89

Certification	
Device	CE, FCC, UL

1 4K/UHD @ 60Hz is limited to 4:2:0 over HDBaseT, 4K/UHD@60Hz 4:4:4 is available via local HDMI