



Introduction

The Atlona **AT-HDR-CAT-4ED** is a high dynamic range (HDR) distribution amplifier with one HDMI® input and four extended distance HDBaseT™ outputs. Each output transmits 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling plus support for HDR formats, multi-channel audio, Ethernet, control signals, and power up to 330 ft. (100 m) over Category 6/6A cable. The HDR-CAT-4ED features sophisticated integration capabilities designed for commercial AV distribution applications including HDMI pass-through, audio de-embedding, EDID management, CEC display control, RS-232 and IR control extension, remote power for receivers, and HDBaseT link testing. It offers compatibility with any TCP/IP or RS-232 control system and is housed in 1U, half-rack width enclosure with external universal power supply. The HDR-CAT-4ED is ideal for sending HDR and 4K/60 4:4:4 content to AT-HDR-EX-100CEA-RX receivers.

Applications

- **Hospitality and retail**
Ideal for hotel lobbies, malls, stores, and restaurants that need long distance signal extension of high-impact marketing content and program information.
- **Commercial**
Display company information on screens in reception areas or production and safety information on screens in the warehouse and manufacturing floor.
- **Education**
Complements lecture hall and auditorium AV systems by allowing presentation content to be distributed to repeater displays located throughout the space

Key Features

- 4K HDR extended distance distribution amplifier with one HDMI input and four HDBaseT outputs.
- Pass-through HDMI output to support local monitor.
- 4K/UHD capability @ 60 Hz with 4:4:4 chroma sampling.
- Supports HDR10, HLG, and Dolby® Vision™ HDR formats.
- Features visually lossless compression with no latency to enable HDR and 4K/60 4:4:4 video signal extension over HDBaseT.
- HDBaseT outputs extend HDMI, Ethernet, control signals, and power up to 330 feet (100 meters) for both 4K HDR and 1080p with Category 6/6A.
- Bidirectional RS-232 and IR control extension for each output.
- Remotely powers compatible receivers over HDBaseT.
- CEC display control sends display power on/off commands over HDBaseT using the power button, IP, or RS-232.
- Audio de-embedding to balanced analog output with volume control for integration with a separate audio system.
- HDBaseT link test verifies cable, termination, and link quality for more reliable installations.
- Multi-channel audio pass-through.
- Cascade up to 8 units to expand system without compromising performance.
- Compliant with HDCP 2.2, the latest specification for passing protected content between devices.
- Manages EDID communications with the source through a display's EDID or internally stored EDID.
- Intuitive GUI-based configuration using integrated web server.
- Flexible control options via TCP/IP, RS-232, and IR with Atlona Velocity™ or third-party control systems.
- Front panel includes LEDs for power, HDBaseT link, and HDMI signal status information as well as buttons for power and EDID control.
- Compatible with HDR-EX-100CEA-RX receivers for 4K/60 4:4:4 HDR as well as AT-UHD-EX receivers for resolutions up to 4K60 4:2:0.
- 1U, half rack width enclosure with surface and rack mounting hardware included.

Specifications

Video	
Signal	Input - HDMI Output - HDMI / HDBaseT
Copy Protection	HDCP 2.2
Pixel Clock	600 MHz
UHD/HD/SD	4096x2160 (DCI) @ 24/25/30/50/60 Hz 720x576p @ 50 Hz 3840x2160 (UHD) @ 24/25/30/50/60 Hz 720x576i @ 25/50 Hz 1920x1080p @ 720x480p @ 60 Hz 23.97/24/25/29.97/30/50/60 Hz 640x480p @ 60 Hz 1920x1080i @ 50/60 Hz 1280x720p @ 30/50/60 Hz
VESA	2560x1600 @ 60 Hz (RB) 1366x768 @ 60 Hz 2048x1536 @ 60 Hz 1360x768 @ 60 Hz 2048x1200 @ 60 Hz 1280x1024 @ 60 Hz 2048x1080 @ 60 Hz 1280x800 @ 60 Hz 1920x1200 @ 60 Hz (RB) 1280x768 @ 60 Hz 1920x1080 @ 60 Hz (RB) 1280x720 @ 60 Hz 1680x1050 @ 60 Hz 1024x768 @ 60 Hz 1600x1200 @ 60 Hz 800x600 @ 60 Hz 1600x900 @ 60 Hz 640x480i @ 29.97/30 Hz 1440x900 @ 60 Hz 1400x1050 @ 60 Hz
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Color Depth	8-bit, 10-bit, 12-bit
HDR	Up to 4K HDR10 @ 60 Hz, 4K Hybrid-Log Gamma (HLG) @ 60 Hz, and 4K Dolby® Vision™ @ 60 Hz ⁽¹⁾

Audio			
HDMI / HDBaseT 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™ DTS:X®
Bit Depth	Up to 24 bits		
Analog Audio			
Format	Stereo 2-Channel		
Balanced Output	+4 dBu nominal gain, +19 dB headroom		
Frequency Response	20 Hz to 20 kHz, ± 0.5 dB		
THD+N	< 0.006% at 20 Hz to 20 kHz		
SNR	> 105 dB at 1 kHz, zero clipping @ 0 dBFS, unweighted		
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		

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

RS-232	
Port	5 x 5-pin captive screw
Use	Unit and external device control and configuration
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Data Flow	Bidirectional

IR	
Port	5 x 5-pin captive screw
Use	Pass-through from control system to sink device Pass-through from viewing location to source
Frequency Range	30 kHz to 60 kHz

CEC	
Ports	1 x HDMI OUT, Type A, 19-pin female; 4 x RJ45 (HDBaseT OUT)
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/6	230	70	330	100
CAT6a/7	330	100	330	100

Buttons and Indicators	
Buttons: POWER, EDID	2 x momentary, tact-type
Indicators: HDMI IN/OUT, HDBaseT (1 - 4), LOCK, INT, LEARN	9 x LED, blue

Connectors	
HDMI IN	1 x Type A, 19-pin female
HDMI OUT	1 x Type A, 19-pin female
HDBaseT OUT	4 x RJ45
LAN	1 x RJ45
AUDIO OUT	1 x 5-pin captive screw
RS-232 / IR	5 x 5-pin captive screw
FW	1 x USB-C
DC 48V	1 x 2-pin captive screw

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	

Power	
Consumption (w/ 4 PoE)	71.5 W
Idle Consumption (no PoE)	11.5 W
BTU/h	39.2
External Power Supply	100 - 240 V AC, 50/60 Hz Output: 48 V / 2.08 A DC

Dimensions (H x W x D)		Inches	Millimeters
Unit		1.73 x 8.64 x 10	44 x 219.5 x 254
Power Supply (AT-PS-48208-C)		1.3 x 2.24 x 5.35	33 x 57 x 136
Weight		Pounds	Kilograms
Device		3.75	1.7
Certification			
Device		CE, RoHS, FCC	
Power Supply		CE, FCC, UL, CUL, TUV-GS, CB, PSE, CCC	
Compliance			
NDA-889		Yes	
TAA		Yes	

Footnotes

- (1) 4K Dolby® Vision™ @ 60 Hz is supported on systems capable of Low Latency Dolby Vision (LLDV) mode.
 All other 4K modes limited to 30 Hz.

Copyright, Trademark, and Registration

© 2023 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, and the HDMI Logo 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).