

ANI-USBC4K™

4K UHD+ HDMI to USB Video
Capture Recorder/Live Streaming





SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the equipment.
 - C. The equipment has been exposed to rain.
 - D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
 - E. The equipment has been dropped, or the enclosure damaged.

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DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTRODUCTION

The ANI-USBC4K HDMI to USB video capture recorder with HDMI bypass can support resolutions up to 18Gbps (600MHz) 4K UHD with HDR (via the bypass path) while simultaneously streaming the audio and video signal at 1080p to a USB connected PC for capture or re-broadcast. HDMI sources up to 1080p@60 are supported for capture without modification, while 4K sources will be automatically scaled down to 1080p. The use of a special video timing stabilization feature helps to ensure that the USB capture stream won't lock up or drop, even if the HDMI input source is intermittent or becomes disconnected. Digital stereo audio from either HDMI (LPCM 2.0) or the 3.5mm analog audio input will be captured with the HDMI video source and is selectable within the configuration software. USB capture is accomplished using the UAC (USB Audio Class) and UVC (USB Video Class) standards, allowing the unit to support most common video capture, chat, or streaming software, including support for the Free OBS ([Open Broadcaster Software](#)) streaming software which is available for Windows PC, macOS and Linux. The unit is powered directly by the USB 3.0 port so an external power supply is not required (A Y-cable is required when connected via USB 2.0 in order to deliver the necessary power). Availability and access to the controllable features of the unit depend on the capture software used. This product has a 3 year warranty.

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- HDMI to USB Video Capture Recorder
- USB 3.0 Cable (Type-B to Type-A)
- Shockproof Feet (Set of 4)
- Users Guide

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

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FEATURES

- HDMI input and output with HDR, 3D & 4K@60Hz support, DVI 1.0 compatible
- HDCP 2.2 and HDCP 1.x compliant
- Supports up to 4K UHD (18Gbps, 4K@50/60Hz 4:4:4, 8-bit) video input and output
- Supports Deep Color input and output up to 12-bit
- Supports 10-bit and 12-bit HDR (High Dynamic Range) input/output
- Automatically scales 4K sources to 1080p for USB capture
- Unit may be powered directly via USB 3.0 (When using USB 2.0, a Y-cable is required to provide additional power)
- Supports video timing stabilization to help ensure a reliable and stable USB capture stream
- Capturing over USB 3.0 allows uncompressed video and audio data capture (up to 1080p, LPCM 2.0)
- Capturing over USB 2.0 requires the application of minimal MJPEG compression to the video and audio data (up to 1080p, LPCM 2.0)
- Supports capturing 2 channel digital audio from either HDMI (LPCM 2.0) or the 3.5mm analog audio input (selectable via configuration software)
- Compliance with the UAC (USB Audio Class) and UVC (USB Video Class) standards, allows the unit to support most common capture and video streaming software **Note:** *Availability and access to the controllable features of the unit depend on the capture software used.*
- Support for the Free OBS (Open Broadcaster Software) streaming software which is available for Windows PC, macOS and Linux

SPECIFICATIONS

- **HDMI Bandwidth:** 600MHz/18Gbps
- **Input Ports:** HDMI, Stereo (3.5mm)
- **Output Ports:** HDMI, USB 3.0 (Type-B)
- **Power Supply:** Powered by USB
- **ESD Protection Human Body Model:**
 - ±8kV (Air Discharge)
 - ±4kV (Contact Discharge)
- **Dimensions (WxHxD):** 5 x 1 x 4.25 in (128x25x108mm) [Case Only] / 5 x 1 x 4.6 in (128x25x117mm) [All Inclusive]
- **Weight:** .8 lbs / 364g
- **Chassis Material:** Metal (Steel)
- **Silkscreen Color:** Black
- **Operating Temperature:** 0°C–40°C/32°F–104°F
- **Storage Temperature:** -20°C–60°C/-4°F–140°F
- **Relative Humidity:** 20–90% RH (Non-condensing)
- **Power Consumption:** 7.15W

As product improvements are continuous, specifications are subject to change without notice.

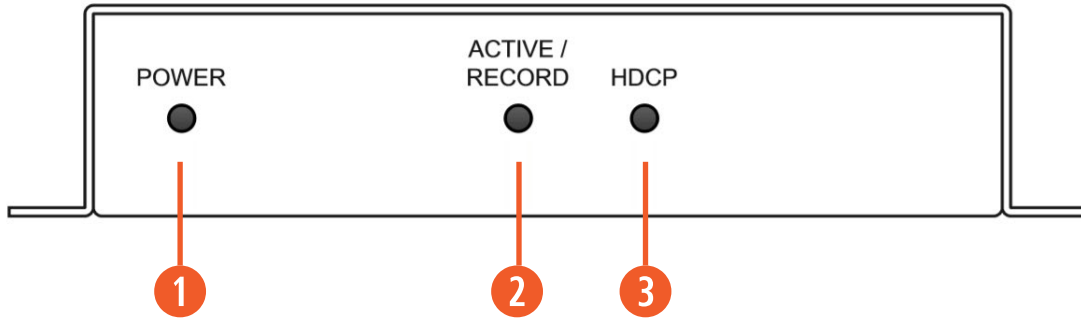
APPLICATIONS

- Live video stream recording for broadcast
- Security camera recording
- Gameplay video archival

SYSTEM REQUIREMENTS

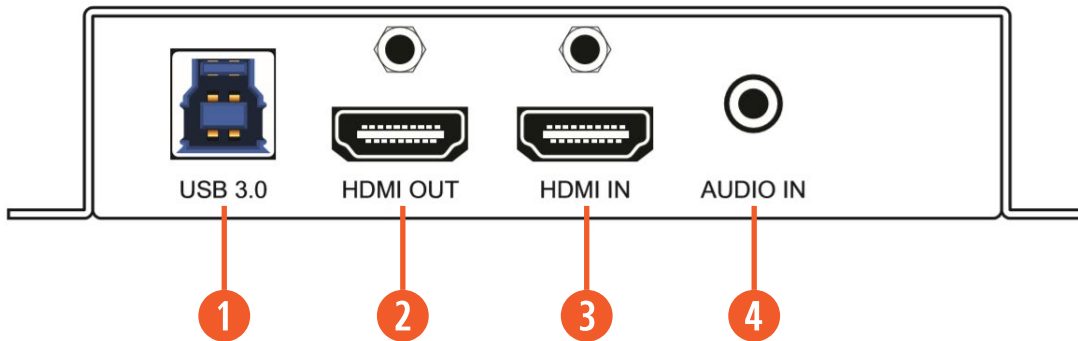
- HDMI source equipment such as a media player, video game console or set-top box.
- HDMI receiving equipment such as an HDTV, monitor or audio amplifier.
- Personal computer (Windows or macOS) with a USB 3.0 port and plenty of available hard drive space.

FRONT PANEL



- ❶ **POWER LED:** This LED will illuminate RED to indicate the unit is on and receiving power but does not yet have a live HDMI source. When a live HDMI source is detected, the LED will illuminate GREEN.
- ❷ **ACTIVE/RECORD LED:** When software on the connected PC is actively receiving video from the unit via USB, this LED will illuminate GREEN.
- ❸ **HDCP LED:** This LED indicates the HDCP state of the connected HDMI source. If the source is using HDCP 1.x, the LED will illuminate RED. If the source is using HDCP 2.2, the LED will illuminate BLUE. If the source is not using HDCP, the LED will remain off.
Note: Recording video sources containing HDCP protection is not supported by this unit. Only HDMI bypass will be active with HDCP sources.

BACK PANEL



- ❶ **USB 3.0 PORT:** Connect directly to a PC's USB 3.0 port for control, video capture and power. Note: If connected via USB 2.0, use of a Y-cable connected to 2 USB 2.0 ports is required in order to properly power the unit.
- ❷ **HDMI OUT PORT:** Connect to an HDMI TV, monitor or amplifier for digital video and audio output.
- ❸ **HDMI IN PORT:** Connect to HDMI source equipment such as a media player, game console or set-top box.
- ❹ **AUDIO IN PORT:** Connect to the stereo analog output of a device such as an audio player or PC.

CONFIGURATION AND VIDEO CAPTURE

VIDEO CAPTURE CONFIGURATION

The USB Video Capture Control software provides control over a selection of basic functions of the unit, including: audio source, HDCP, video settings and volume. An option to return the unit to its factory defaults is also provided.

Note: Please obtain the “USB Video Capture Control” software from your authorized dealer and save it in a directory where you can easily find it. Both Windows and macOS versions are available. To use the software, connect the unit to your PC via the provided USB 3.0 cable and then execute the control application. A configuration window, similar to the screenshot below, will appear. All changes made to the video capture signal via this app will take effect immediately.

1. Audio Source: Switch the audio source to record between the embedded HDMI audio and the analog line input.

Note: Only LPCM 2.0 audio can be recorded. Bitstream audio is not supported.

2. HDCP: Enable or disable HDCP support on the HDMI input.

Note: Disabling HDCP support may enable the recording of the output of some source devices (typically PCs/Macs) that enable HDCP encryption even when it is not required by the current video content. Once HDCP support is disabled on this unit, the connected device should automatically switch to a non-HDCP mode as long as the playing content allows it. Certain other source devices (such as most major video game consoles) enable HDCP output by default, but will not automatically disable HDCP based on the connected device’s reported capabilities. In order to enable video recording of the output of these devices, HDCP must be manually disabled using the game console’s own system menu.

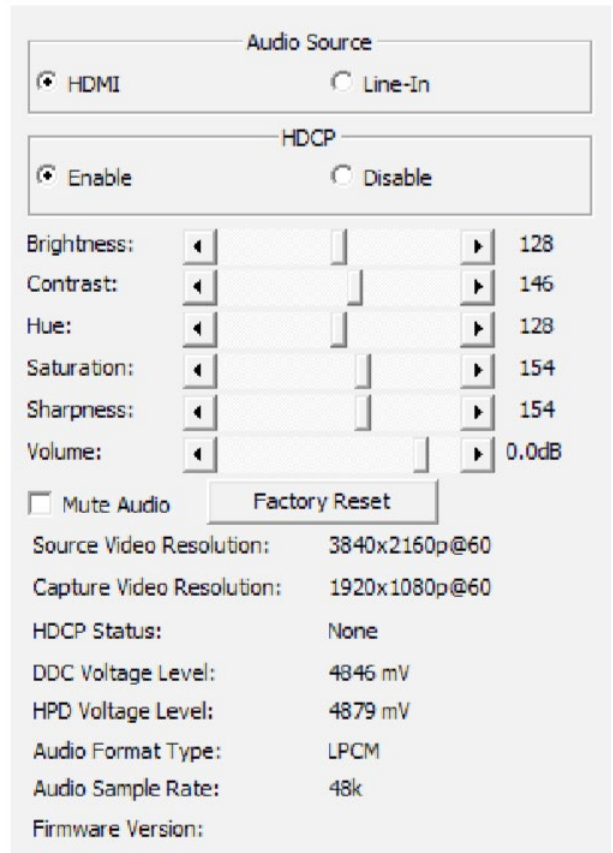
3. ProcAmp Controls: This section provides direct control over a variety of video and audio settings when video capture is active.

Note: Changes to these settings have no impact on the HDMI bypass output signal.

- **Brightness:** Provides control over the overall brightness of the captured video.
- **Contrast:** Provides control over the overall contrast of the captured video.
- **Hue:** Provides control over the hue shift of the captured video.
- **Saturation:** Provides control over the color saturation level of the captured video.
- **Sharpness:** Provides control over the amount of sharpness processing to apply to the captured video.
- **Volume:** Provides control over the audio volume of the captured video.
- **Mute Audio:** Mutes or unmutes audio in the captured video.

4. Factory Reset: Press the “Factory Reset” button to reset the unit to its factory default state. After the reset is complete, the unit will reboot automatically.

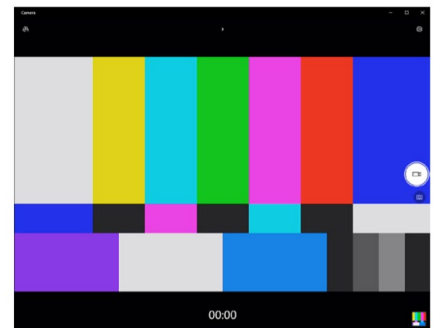
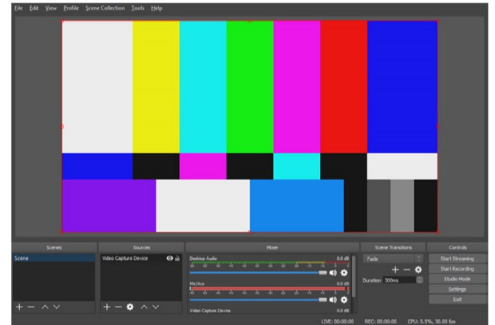
5. Detailed Signal Information: This section provides detailed information about the current source and capture resolution, HDCP state, DDC and hot-plug voltages, audio format and sample rate, and current firmware version.



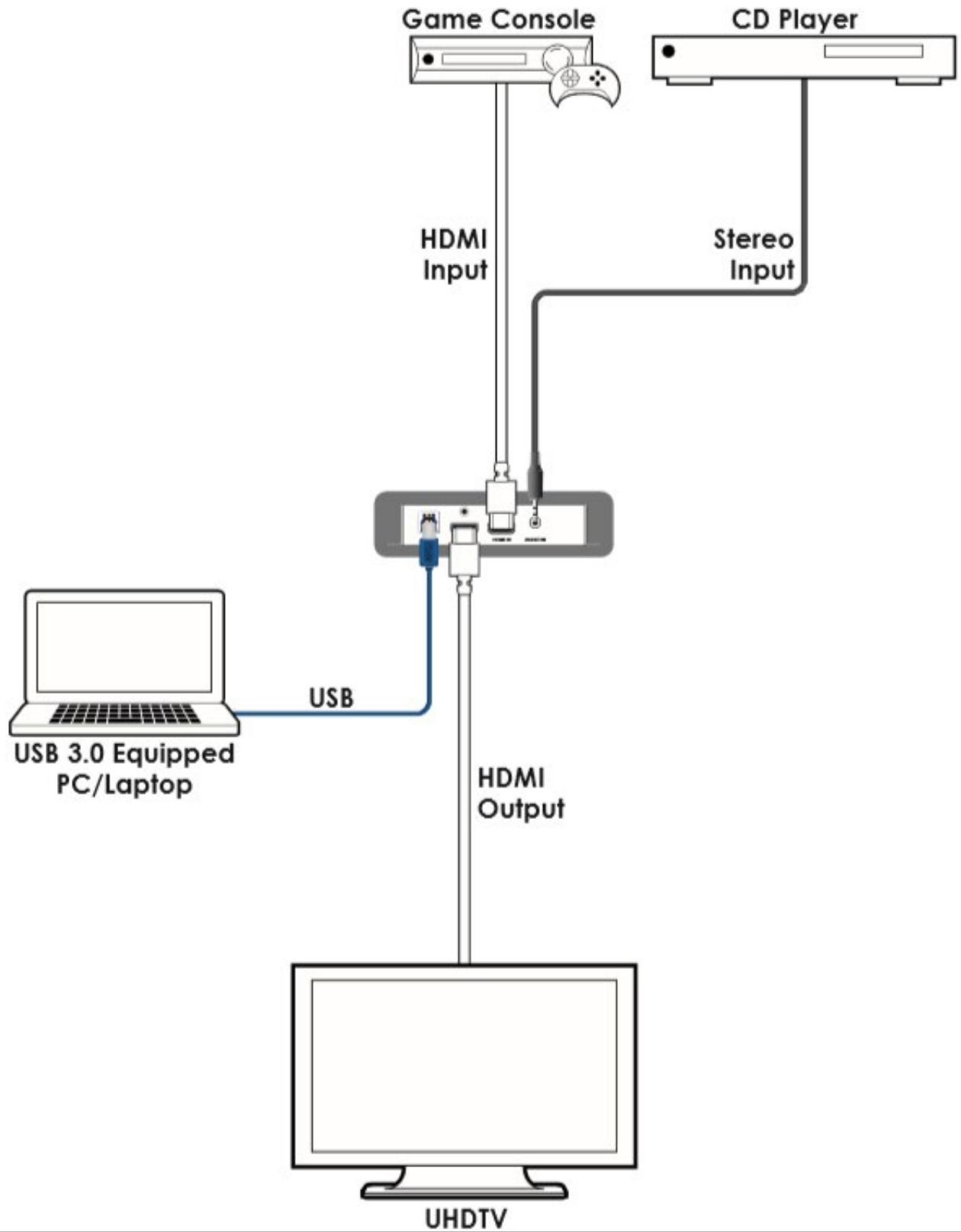
CONFIGURATION & VIDEO CAPTURE

VIDEO CAPTURE

Video capture is accomplished using 3rd party software. The choice of video capture software is entirely up to the user. This unit adheres to the UAC (USB Audio Class) and UVC (USB Video Class) standards, allowing the unit to support most common video capture, chat, or streaming software, including support for the Free OBS (Open Broadcaster Software) streaming software, among many other choices. Availability and access to the controllable features of the unit (such as capture resolution, recording storage format, etc.) depends on which features the specific capture software package chooses to expose. Note: Many source devices (such as most major video game consoles) force HDCP output by default, even when it is not required by the content currently being output. In order to enable video recording of the output of these devices, HDCP must be manually disabled using the game console's own system menu.



CONNECTION DIAGRAM



VIDEO SPECIFICATIONS

Supported Resolutions (Hz)	Input	Output
	HDMI	HDMI Bypass
720x400@85	✓	✓
720x480p@60	✓	✓
640x480@60/72/75/85	✓	✓
720x576p@50	✓	✓
800x600@56/60/72/75/85	✓	✓
1280x720@50/60	✓	✓
1024x768@60/70/75/85	✓	✓
1280x768@60/75	✓	✓
1360x768@60	✓	✓
1366x768@60	✓	✓
1280x800@60	✓	✓
1152x864@75	✓	✓
1440x900@60	✓	✓
1280x960@60	✓	✓
1280x1024@60	✓	✓
1400x1050@60	✓	✓
1680x1050@60/60 (RB)	✓	✓
1920x1080i@50/60	✓	✓
1920x1080p@24/25/30/50/60	✓	✓
1600x1200@60	✓	✓
1920x1200@60 (RB)	✓	✓
2560x1600@60 (RB)	✓	✓
2560x1440@60 (RB)	✓	✓
3840x2160@24/25/30	✓	✓
3840x2160@50/60 (4:4:4)	✓	✓
3840x2160@50/60 (4:2:0)	✓	✓
4096x2160@24/25/30	✓	✓
4096x2160@50/60 (4:4:4)	✓	✓
4096x2160@50/60 (4:2:0)	✓	✓

AUDIO SPECIFICATIONS

Analog Input	
Max Audio Level	2Vrms
Impedance	10kΩ
Type	Unbalanced

HDMI Input/Output	
LPCM	
Maximum Channels	8 Channels
Sampling Rate (kHz)	32, 44.1, 48, 88.2, 96, 176.4, 192
Bitstream	
Supported Formats	None

CABLE SPECIFICATIONS

HDMI Cable Length	1080p		4K30	4K60
	8-bit	12-bit	8-bit	8-bit
Input	49 ft / 15 M	32 ft / 10 M	26 ft / 5 M	10 ft / 3 M
Output	49 ft / 15 M	32 ft / 10 M	26 ft / 5 M	10 ft / 3 M

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