4K@60, HDCP 2.2 supported HDMI audio De-embedder/Embedder

UHDS-01

The IDK UHDS-01 HDMI audio de-embedder/embedder supports HDCP 2.2 for HDMI output and 4K@60 having four times the resolution of full HD.
The UHDS-01 HDMI converts the digital audio to analog audio, and it also can convert analog audio to digital audio in order to input HDMI signals.

■ Specification

Item				Description
Input	Video	HDMI / DVI	Number / Signal	1 input / HDMI, DVI 1.0 (HDCP 1.4 / 2.2) (*1) / HDR (*2) / 3D (*3) / xvYCC - TMDS single link - TMDS clocks: 25 MHz to 300 MHz - Dot clocks: 25 MHz to 600 MHz - TMDS data rate: 0.75 Gbps to 18 Gbps
			Connector	1 female HDMI Type A
		Others		Color depth : 24 bit, 30 bit, 36 bit　Deep Color (*5)
		Formats		VGA to 4K (*4) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (*4)
	Audio	Digital	Number / Signal	1 input / Multi-channel linear PCM up to 8 channels - Sampling frequency: 32kHz to 192kHz - Sample Size: 16bit to 24bit - Reference level: -20 dBFS - Max. input level: 0 dBFS
			Connector	1 female HDMI Type A
		Analog	Number / Signal	1 output / Stereo L/R unbalanced signals (*6) - input impedance: 24 Ω, - Reference level: -10 dBu - Max. output level: +10 dBu
			Connector	1 RCA jack
Output	Video	HDMI / DVI	Number / Signal	1 output / HDMI, DVI 1.0 (HDCP 1.4 / 2.2) (*1) / HDR (*2) / 3D (*3) / xvYCC - TMDS single link - TMDS clocks: 25 MHz to 300 MHz - Dot clocks: 25 MHz to 600 MHz - TMDS data rate: 0.75 Gbps to 18 Gbps
			Connector	1 female HDMI Type A
		Others		Color depth : 24 bit, 30 bit, 36 bit　Deep Color (*5)
		Formats		VGA to 4K (*4) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (*4)
	Audio	Digital	Number / Signal	1 output / Multi-channel linear PCM up to 8 channels - Sampling frequency: 32kHz to 192kHz - Sample Size: 16bit to 24bit - Reference level: -20 dBFS - Max. output level: 0 dBFS
			Connector	1 female HDMI Type A
		Analog	Number / Signal	1 output / Stereo L/R unbalanced signals (*7) - Output impedance: 75 Ω, - Reference level: -10 dBu - Max. output level: +10 dBu
			Connector	1 RCA jack
Plug & Play				DDC2B (built-in EDID / EDID copied from monitors / can be selected from EDID of connected monitors) Built-in EDID: the maximum resolution can be selected.
Max. Cable distance		Input		1080p@60: up to 131.23 ft. approx. / 40 m, 4K@60: up to 39.37 ft. approx. / 12 m (*8)
		Output		1080p@60: up to 131.23 ft. approx. / 40 m, 4K@60: up to 39.37 ft. approx. / 12 m (*8)
Functions	Contents			Audio A/D and D/A conversion Anti-snow (*9) De-embedded audio from HDMI signal DDC buffer 7 segment LED signal status check Connection Reset (*10) Key lock
Others	Power			100 - 240 VAC ± 10 %, 50 Hz/60 Hz ± 3 Hz
	Power consumption			About 8 Watts
	Dimensions			8.27 x 1.73 x 7.87'/ 210 (W) x 44 (H) x 200 (D) mm (EIA rack 1/2U size, projections are not included)
	Weight			3.31 lbs. approx. / 1.5kg
	Temperature			Operating: 32°F to 104°F / 0°C to +40°C Storage: -4°F to 176°F / -20°C to +80°C
	Humidity			Operating / Storage humidity: 20 % to 90 % (Non Condensing)

*1 Lip Sync, ARC, and HEC are not supported. CEC: Pass through between IN and OUT1
*2 HDR will be supported when you connect HDR supported corresponding sink device and select external EDID setting, or when you copy EDID of HDR supported sink device by selecting EDID copy setting. If the unit supports HRD, all output signals from the unit are HDR supported signals.
*3 3D will be supported when you connect 3D supported corresponding sink device and select external EDID setting, or when you copy EDID of 3D supported sink device by selecting EDID copy setting. If the unit supports 3D, all output signals from the unit are 3D supported signals.
*4 4K format: 24 Hz / 25 Hz / 30 Hz / 50 Hz (4:4:4) / 59.94 Hz (4:4:4) / 60 Hz (4:4:4) are supported.
*5 4K format: following color depth are supported.
　・24 Hz / 25 Hz / 30 Hz: 24 bit, 30 bit, 36 bit (RGB, YCbCr 4:4:4, YCbCr 4:2:2)
　・50 Hz / 59.94 Hz / 60 Hz : 24 bit、30 bit、36 bit (YCbCr 4:2:2, YCbCr 4:2:0)
　　　　　　　　　　　　　　 : 24 bit (RGB, YCbCr 4:4:4)
*6 Audio input is switch selectable between digital embedded audio and analog audio.
*7 Analog audio output supports only 2 channel linear PCM.
*8 The maximum cable distance is measured under following conditions:
　・1080p@60: when IDK's AWG24 cable was used and signals of 1080p@60 24 bit / pixel (8 bit / component) was input or output.
　・4K@60 : when IDK's 18 Gbps supported cable was used and signals of 4K@60 24 bit / pixel (8 bit / component) was input or output.
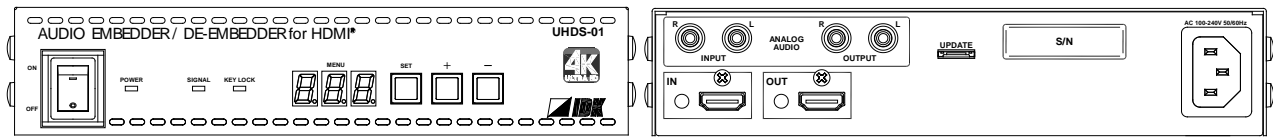　The maximum cable distance depends on the connected I/O devices. With some I/O combinations, and if you use cables of other manufacturer, video may be disturbed or may not be output even if signals are within the range mentioned above.

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*9 The anti-snow feature automatically fixes snow noise that is a specific symptom of HDCP-compliant signals and mainly occurs at start-up. This feature does not work when snow noise has already occurred during startup or when it occurs due to a bad condition of the transmission line.

*10 For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the MSD's output. If other devices are connected between the MSD's output and sink device, this feature may be invalid.
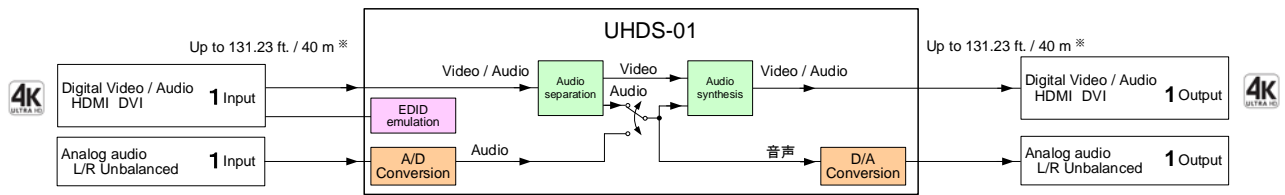
■ Front and rear panels

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4K@60, HDCP 2.2 supported HDMI audio De-embedder/Embedder
UHDS-01 Diagram and Features

■ Diagram

Up to 131.23 ft. / 40 m ※

UHDS-01

Digital Video / Audio
HDMI DVI   **1** Input

Analog audio
L/R Unbalanced   **1** Input

EDID emulation

A/D Conversion

Video / Audio

Audio separation

Audio

Audio

Video

Audio synthesis

Video / Audio

音声

D/A Conversion

Up to 131.23 ft. / 40 m ※

Digital Video / Audio
HDMI DVI   **1** Output

Analog audio
L/R Unbalanced   **1** Output
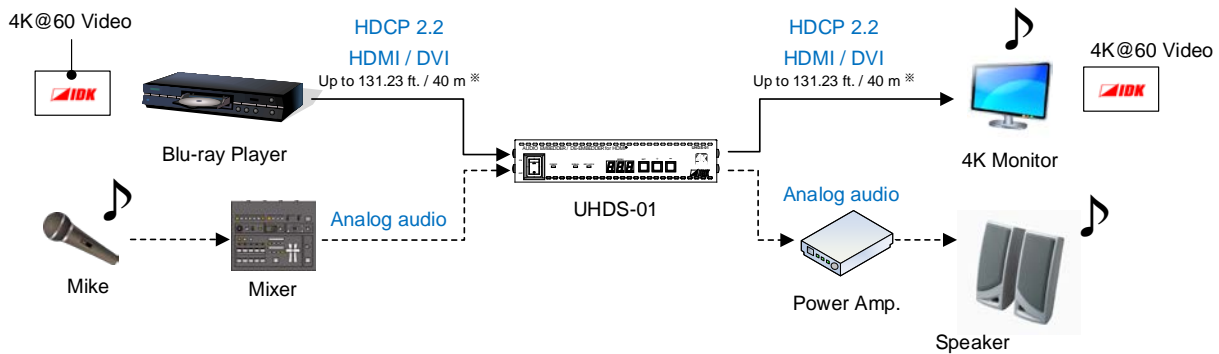
※ Maximum cable distance
1080p@60: up to 131.23 ft. approx. / 40 m, 4K@60: up to 39.37 ft. approx. / 12 m (when IDK's 18 Gbps supported cable was used)

■ Sample connection diagram

4K@60 Video

Blu-ray Player

HDCP 2.2
HDMI / DVI
Up to 131.23 ft. / 40 m ※

Mike

Mixer

Analog audio

UHDS-01

HDCP 2.2
HDMI / DVI
Up to 131.23 ft. / 40 m ※

4K Monitor

4K@60 Video

Analog audio

Power Amp.

Speaker

※ Maximum cable distance
1080p@60: up to 131.23 ft. approx. / 40 m, 4K@60: up to 39.37 ft. approx. / 12 m (when IDK's 18 Gbps supported cable was used)

[Features]
■ Video
- Up to 4K@60 (4:4:4)
- HDCP 1.4 / 2.2
- HDR
- 3D
- xvYCC
- Maximum input/output cable distance:
  - 1080p@60: up to 131.23 ft. approx. / 40 m
  - 4K@60: up to 39.37 ft. approx. / 12 m (using 18 Gbps supported High-Speed HDMI cable)
- Anti-snow

■ Audio
- Analog audio de-embedded
- Analog audio embedded

■ Others
- EDID emulation
- DDC buffering
- Seven-segment LED signal status check
- Connection reset
- CEC pass through between IN and OUT

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