VAC-4000UHD

4K@60 and HDCP2.2 HDMI Distribution Amplifier (with audio De-embedder)

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The IDK VAC-4000UHD is a high-performance HDMI distribution amplifier for video and audio supporting 4K@60 and HDCP 2.2.
The VAC-4000UHD distributes 4K@60 video signals having four times the resolution of full HD to 4 HDMI outputs, which support HDCP 2.2.
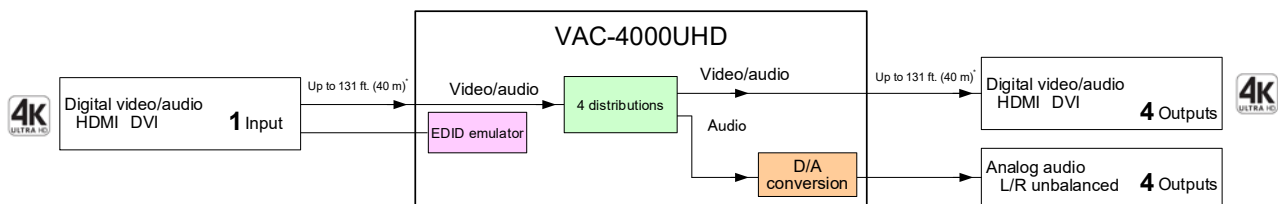This distribution amplifier can convert digital audio to analog audio as well.

FRONT & REAR PANEL

FEATURES

■ **Video**
- Up to 4K@60 (4:4:4)
- HDCP 1.4 / 2.2
- HDR
- 3D
- x.v.Color
- Maximum input/output cable distance:
  - 1080p@60: up to 131 ft. (40 m)
  - 4K@60: up to 39 ft. (12 m) (using 18 Gbps supported High-Speed HDMI cable)
- Cascade connection
- Anti-snow

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

■ **Others**
- EDID emulation
- DDC buffering
- Seven-segment LED signal status check
- Connection reset
- CEC pass through between IN and OUT1

DIAGRAM

* Maximum cable distance
  1080p@60: up to 131 ft. (40 m), 4K@60: up to 39 ft. (12 m) (when IDK's 18 Gbps supported cable was used)
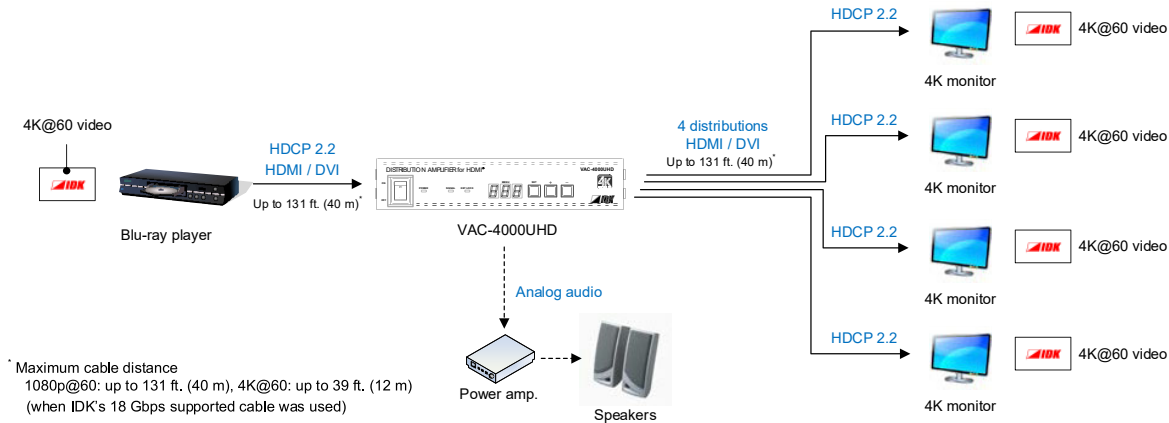
Ver.1.1.1 (180903)

CONNECTION DIAGRAM

SPECIFICATIONS

Item				Description
Input	Video	Digital	Number / Signal	1 input / HDMI, DVI 1.0 (HDCP 1.4 / 2.2) (*1) / HDR (*2) / 3D (*3) / x.v.Color - 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 LPCM 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
Output	Video	Digital	Number / Signal	4 outputs / HDMI, DVI 1.0 (HDCP 1.4 / 2.2) (*1) / HDR (*2) / 3D (*3) / x.v.Color - 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	4 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	4 outputs / Multi-channel LPCM up to 8 channels - Sampling frequency: 32kHz to 192kHz - Sample Size: 16bit to 24bit - Reference level: -20 dBFS - Max. output level: 0 dBFS
			Connector	4 female HDMI Type A
		Analog	Number / Signal	1 output / Stereo L/R unbalanced signals (*6) - 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: 131 ft. (40 m), 4K@60: 39 ft. (12 m) (*7)
		Output		1080p@60: 131 ft. (40 m), 4K@60: 39 ft. (12 m) (*7)
Functions	Contents			Audio A/D and D/A conversion, Anti-snow (*8), De-embedded audio from HDMI signal DDC buffer, 7 segment LED signal status check, Connection Reset (*9), Key lock
Others	Power			100 - 240 VAC ± 10 %, 50 Hz/60 Hz ± 3 Hz
	Power consumption			About 12 Watts
	Dimensions			8.3 x 1.7 x 7.9' (210 (W) x 44 (H) x 200 (D) mm) (EIA 1U high, half rack wide) (Excluding connectors and the like)
	Weight			3.3 lbs. (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   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   Analog audio output supports only 2 channel linear PCM.
*7   The maximum cable distance varies depending on the connected devices and was 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 devices. The distance may not be extended with some device combinations, cabling method, or other manufacturer's
      cable. Video may be disturbed or may not be output even if signals are within the range mentioned above.
*8   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.
*9   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.