

1080P60 H.265 AV over IP KVM Decoder

Adds a display with keyboard, mouse, and IR control of the source to your AV-over-IP system without adding an encoder — over the standard 1G network you already have. A compact 1080P60 H.265/H.264 AV-over-IP KVM decoder, the AVO-IP265HDK-DEC brings USB-KVM and bidirectional IR to every endpoint and racks up to 10 units in 6U or 4 in 1U — the right choice for control rooms, command centers, education, and corporate AV where display and control points grow independently of sources.

It receives any AVO-IP265HDK encoder's stream by unicast or multicast, drives matrix switching and video wall up to 9×9, extracts analog audio, and passes RS-232 / IR through — all configured through the web GUI, with USB DEVICE ports for the operator's keyboard and mouse. Pair it to a source with the AVO-IPCTL-265HD controller or an RS-232 command. Sold as a standalone decoder, it turns KVM expansion into a simple add-on. Encoders (AVO-IP265HDK-ENC) sold separately.

Surge Protection Recommended — This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection is highly recommended.

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FEATURES

- ✓ H.265/H.264 codec — 1080P@60Hz 4:4:4, up to 1920×1200@60Hz, HDMI 1.3, HDCP 1.4
- ✓ USB-KVM — 2× USB DEVICE (Type A) for the operator's keyboard and mouse at the display
- ✓ Bidirectional IR — IR IN + IR OUT (3.5mm) for IR pass-through to and from the source
- ✓ Decodes any AVO-IP265HDK encoder stream to a connected HDMI display
- ✓ Compact form factor: 8.03" × 3.74" × 0.85" (204 × 95 × 21.5mm), 1.03 lbs
- ✓ Rack-dense: 6U rack (up to 10 units) or 1U rack (up to 4 units)
- ✓ Matrix switching, video wall up to 9×9, unicast and multicast reception over 1G
- ✓ Analog audio extraction — LPCM 2.0CH to the 3-pin Phoenix output
- ✓ RTSP sub-stream for VLC and third-party application preview
- ✓ RS-232 pass-through, guest mode, and single-machine control (no controller box); Web GUI for scaling and firmware
- ✓ PoE 802.3af Class 3 PD or DC 12V/1A — 2.77W; works with AVO-IPCTL-265HD controller

PACKAGE CONTENTS

Each AVO-IP265HDK-DEC includes: 2× 3-pin Phoenix connectors | 1× IR receiver + 1× IR blaster cable | 2× Mounting ears | 4× Screws | 1× DC 12V/1A locking PSU | User manual. Encoder (AVO-IP265HDK-ENC) sold separately.

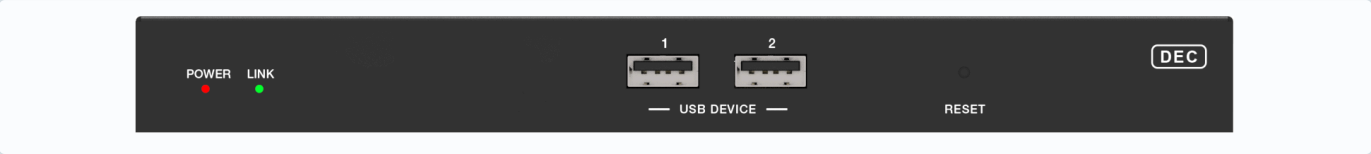
Specifications

TECHNICAL		
	Video Compression	H.265 / H.264
	HDMI Compliance	HDMI 1.3
	HDCP Compliance	HDCP 1.4
	Video Resolution	Up to 1920×1200@60Hz 4:4:4 (1080P60)
	Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2
	Color Depth	Input: 8/10/12-bit (1080p@60Hz) • Output: 8-bit
	Audio Formats	LPCM 2.0CH (32 / 44.1 / 48kHz)
	Video Bandwidth	4.95Gbps
USB-KVM & IR		
	USB-KVM	2× USB DEVICE [Type A] for the operator's keyboard/mouse
	IR	Bidirectional — IR IN + IR OUT (3.5mm), 20K–60KHz
CONNECTION		
	Connectors	1× HDMI OUT [Type A, 19-pin female] 1× LAN [RJ45, PoE] 1× Audio OUT [3-pin Phoenix] 1× RS-232 [3-pin Phoenix] 1× IR IN + 1× IR OUT [3.5mm]
	Transmission Distance	Up to 328 ft / 100m via CAT5E/6/6A/7
NETWORK & CONTROL		
	Network	100M / 1G Ethernet (RJ45), IGMP multicast
	Control	USB-KVM • Bidirectional IR • RS-232 pass-through • TCP/IP • Web GUI • AVO-IPCTL-265HD controller
	Default IP / Login	169.254.100.253 • admin / admin
	Video Wall	Up to 9×9 (81 displays)
POWER		
	Power Supply	PoE 802.3af Class 3, or DC 12V/1A (AC100–240V 50/60Hz adapter)
	Power Consumption	2.77W
MECHANICAL		
	Housing	Metal enclosure, Black
	Dimensions (W×D×H)	8.03" × 3.74" × 0.85" (204 × 95 × 21.5mm)
	Rack Mounting	6U rack: up to 10 units • 1U rack: up to 4 units
	Net Weight	1.03 lbs (467g)
ENVIRONMENTAL		
	Operating Temperature	14°F – 113°F (–10°C – 45°C)
	Storage Temperature	–4°F – 140°F (–20°C – 60°C)
	Relative Humidity	20% – 90% RH (no condensing)
	ESD Protection	IEC 61000-4-2: ±8kV air-gap, ±4kV contact



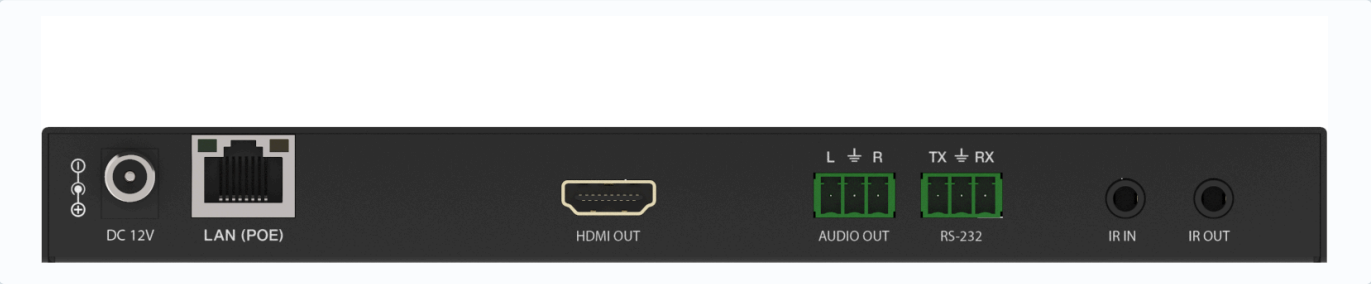
Operation Controls

FRONT PANEL



Port	Function Description
POWER LED (Red)	Flashes at 2Hz during startup; stays on after startup completes.
LINK LED (Green)	Network status. On: connected with video data. Flashing: no video data. Off: not connected.
USB DEVICE 1 / 2 (Type A)	Connect the operator's keyboard and mouse to control the paired source.
RESET	Press and hold 3 seconds to restart and restore factory settings.

REAR PANEL



Port	Function Description
DC 12V	Local DC 12V/1A input, or power via PoE from the switch (PD mode).
LAN (POE)	100M/1G network port; connect to a switch/router/hub for data and PoE.
HDMI OUT	HDMI output to the display (TV, monitor, projector).
AUDIO OUT (3-pin Phoenix)	Analog stereo audio output; follows the encoder's audio source.
RS-232 (TX/GND/RX)	Serial control — pass-through and local serial control.
IR IN	Wideband IR receiver input (3.5mm) for IR pass-through to the source.
IR OUT	IR blaster output (3.5mm) to control the local display.



Setup & Application

ENCODER & DECODER MATCHING

Every AVO-IP265HDK-ENC and AVO-IP265HDK-DEC ships with a unique ID. To pair a decoder to an encoder, use the AVO-IPCTL-265HD controller or send the RS-232 command **!OUT xxx FR yyy**, where xxx is the decoder (output) ID and yyy is the encoder (source) ID. Multiple decoders may subscribe to the same encoder for one-to-many distribution, and any decoder can be re-pointed to a different encoder to build a matrix or video wall up to 9×9.

A Layer-3 managed Gigabit switch with IGMP Snooping / multicast enabled is required. Default device IPs are **169.254.100.254** (encoder) and **169.254.100.253** (decoder); log in to the Web GUI as **admin / admin** to configure streams, EDID, and network settings.

USB-KVM & BIDIRECTIONAL IR

USB-KVM. Connect the *USB HOST* (Type B) port on the encoder to a USB port on the source PC. Plug the operator's keyboard and mouse into the *USB DEVICE* (Type A) ports on the decoder. The decoder that currently holds control passes keyboard and mouse over IP to the source — KVM control of a given source is granted one operator at a time, switchable through the controller or Web GUI.

Bidirectional IR. Each unit provides an *IR IN* (3.5mm wideband receiver, 20K–60KHz) and an *IR OUT* (3.5mm blaster). Point a remote at the IR receiver at one end to control a device at the other end; IR travels in both directions between the encoder and decoder locations. Use the supplied IR receiver and IR blaster cables.

APPLICATION EXAMPLE

1080P60 H.265 KVM-over-IP — Distribute & Control a Source over 1G



How it works: The encoder converts one HDMI source into an H.265/H.264 stream on a 1G managed network while carrying the source PC's USB over IP. Any number of decoders subscribe by multicast and output HDMI to their displays — the operator's keyboard and mouse plug into the decoder's USB DEVICE ports to control the far-end source.

KVM & IR: USB-KVM (HOST at the encoder, DEVICE at the decoder) gives per-operator keyboard/mouse control; bidirectional IR passes remote-control signals between rooms. Grant control one operator at a time per source.

Matrix & video wall: Route any encoder to any decoder and compose walls up to 9×9 via the AVO-IPCTL-265HD controller or the RS-232 command **!OUT xxx FR yyy**. Each endpoint draws PoE 802.3af — no local PSU required.



Troubleshooting

Q: No video on the connected display?

A: Confirm the decoder is paired to an active encoder (RS-232 *!OUT xxx FR yyy* or the controller) and both are on the same segment with IGMP Snooping enabled. Check the decoder LINK LED is on.

Q: Keyboard/mouse at the display don't control the source?

A: Plug the keyboard and mouse into the decoder's USB DEVICE (Type A) ports and take KVM control of the source — only one operator controls a given source at a time. Confirm the encoder's USB HOST is connected to the source PC.

Q: No audio from the AUDIO OUT port?

A: Analog stereo is extracted to the 3-pin Phoenix output and follows the encoder's audio source. Verify the encoder has an audio source connected and the Phoenix connector is seated.

Q: How do I open the Web GUI?

A: Set your PC to the 169.254.x.x subnet, then browse to the decoder's default IP **169.254.100.253** and log in as **admin / admin**.

Need help? — For additional support, contact KanexPro technical support at support@kanexpro.com or 888.975.1368, or scan the QR code below for the product page.

