DVDO

DVDO-H265-4KDEC-MV-1 Decoder with Multiview

4K60 H.265/H.264 AV over IP System

User Manual

Version v1.0

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Disclaimer

• Important Safety Instructions

1) Do not expose this device to rain or place it near water. Any liquid that goes into the device may cause a failure, fire, or electric shock.
2) Never insert anything metallic into the open parts of this device. This may cause a danger of electric shock.
3) Do not place this device near or over a radiator or heat register, or where it is exposed to direct sunlight.
4) The device should be repaired only by a qualified technician.
5) If a third-party power supply is used, please ensure that the power supply specifications meet the product requirements.

• Introduction

DVDO-H265-4KDEC-MV-1 is a 4K60 AV over IP decoder with multiview functionality, designed to work seamlessly with DVDO-H265-4KENC-1 encoders and DVDO-H265-4KDEC-1 decoders for high-performance AV over IP distribution.

Powered by advanced H.265 technology, it delivers low-latency video transmission and supports flexible distribution configurations including one-to-one, one-to-many and many-to-many setups as well as advanced multiview configurations.

A free control app with real-time video preview provides intuitive system management, making deployment and operation simple and efficient. Designed for professional AV integration, the decoder also supports PoE, audio de-embedding as well bi-directional IR, RS-232, RS-485 & I/O control pass-through.

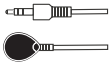
• Features

1. Built on advanced technology to deliver high-definition and low-latency transmission.
2. Supports up to 4096 x 2160@60Hz resolution, backwards compatible.
3. Compatible with CAT5e/6 and above networking cables, the transmission distance can reach up to 120 meters when using CAT6 or above networking cables. The actual distance may vary slightly due to different switch performances.
4. Supports switch cascading.
5. Supports RS-232 Control.
6. Supports RS-485 Control.
7. Supports IR learning remote and control device with app (20～60KHz).
8. Supports I/O interface control.
9. Supports PoE (Power over Ethernet).
10. Support for 3.5mm L/R Channel Audio Separation.
11. When connected to DVDO-H265-4KENC-1 encoders over the network, DVDO-H265-4KDEC-MV-1 can simultaneously process multiple AV signals. Using the control app, users can remotely manage and customize display layouts with ease, including 4-window and 9-window multiview modes, while freely adjusting the size and position of each video window.
12. Firmware upgrade via Micro USB port.
13. Lightning protection, surge protection, ESD protection.
14. Stable 24/7 operation.

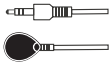
• Package Contents

Decoder Multiview x1

User manual x1



IR receiver extension cable x1



IR blaster extension cable x1

Mounting ear x2

Screw x5

Grounding Screw x1

Terminal block (3P) x2

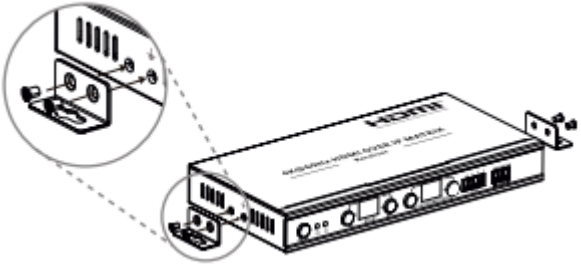
Terminal block (4P) x1

DC5V/2A Power adapter x 1

• Installation Requirements

Item	Description	Requirement
Cable	Cat5e/6 or above, following standard IEEE-568B	CAT6/6A/7 ≤ 120m
Display device	TV, projector, LED screen, etc. with HDMI port	HDMI cable ≤ 5m
Network switch	switch cascade	IGMP PoE Gigabit switch
Router	Use the app to control the product while in the same network	Gigabit bandwidth or higher

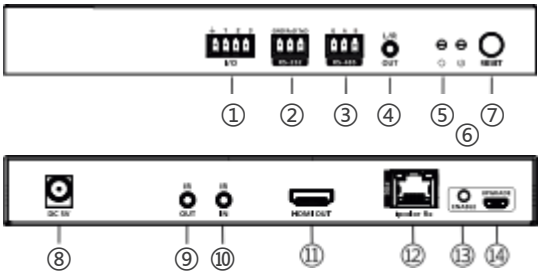
• Mounting Instructions



Note: Choose the wall mounting position and attach the mounting ears to the unit according to the diagram.

• Device Description

1. Encoder with Multiview



①	I/O interface	Use the terminal block to connect the external device,and control the output signal via the control app
②	RS-232 (GND/RxD/TxD)	RS-232 control commands for app
③	RS-485 (G/A/B)	RS-485 control commands for app
④	L/R output	Connect with the audio device with 3. 5mm stereo audio cable
⑤	Status indicator	1) Light off: The network is not connected 2) Steady on: The network is connected
⑥	Power indicator	Indicator lights up when power is applied
⑦	Reset	1) Press to restart the device 2) Press and hold for 5 seconds to restore factory settings

⑧	Power	Connect with DC5V/2A power adapter
⑨	IR output	Connect with IR blaster extension cable
⑩	IR input	Connect with IR receiver extension cable
⑪	HDMI output	Connect with HDMI display device
⑫	ipcolor Rx	Connect with CAT5e/6 or higher-level networking cables (PoE input)
⑬	ENABLE	Press and hold the upgrade button, then power the product, 5 seconds later will enter upgrade mode.
⑭	Micro USB port	Firmware upgrade

• Installation Instructions

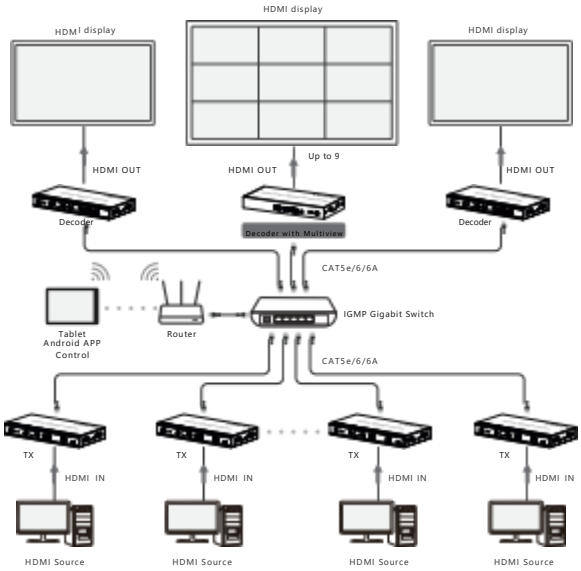
1. How to Make a Networking Cable

Follow the standard of IEEE-568B:

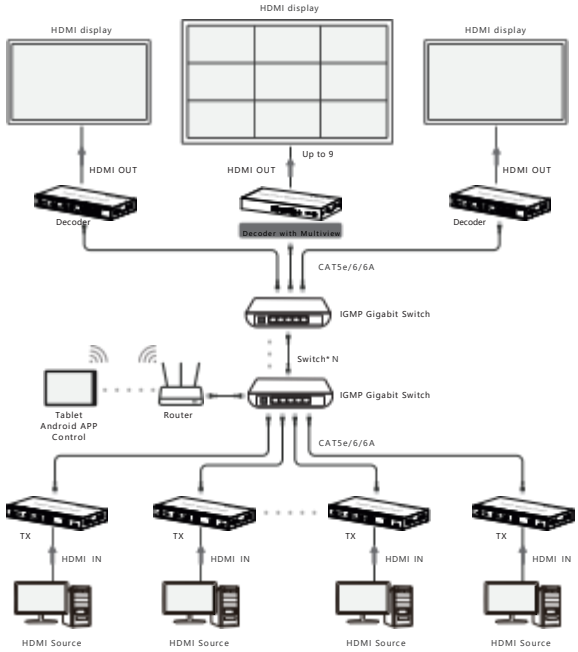
1-white and orange 2-orange 3-white and green 4-blue
5-white and blue 6-green 7-white and brown 8-brown

2.Connection Diagrams

2.1 Regular switch connection



2.2 Cascade Switch Configuration



3.Connection Instructions

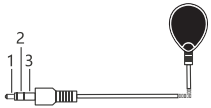
1) Connect DVDO-H265-4KDEC-MV-1 to the HDMI port of the display using an HDMI cable.
2) Connect DVDO-H265-4KDEC-MV-1 with DVDO-H265-4KENC encoders through a 1G network switch using ethernet cables.

3) Insert the IR blaster extension cable into IR OUT and the IR receiver extension cable into IR IN.
4) RS-232 control: insert the terminal block in the RS-232 port, and then connect it to remote console.
5) RS-485 control: insert the terminal block in the RS-485 port, and then connect it to remote console.
6) Audio extraction: connect the L/R output port and external audio device with a 3.5mm stereo audio cable.
7) I/O control: insert a wiring terminal into the I/O interface, then connect it to an external device.
8) Plug the power supply into the devices to get started.

4. Audio Output

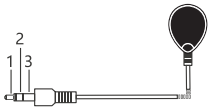
When DVDO-H265-4KDEC-MV-1 receives signals from multiple encoders, it is possible to use the control app to select which audio signal to output to the display or audio equipment.

5. IR Control



IR blaster

1. Power
2. IR Signal
3. Null



IR receiver

1. Power
2. IR Signal
3. Grounding

1) IR blaster extension cable should plug in the IR OUT port, IR receiver extension cable should plug in the IR IN port.
2) The emitter of the IR blaster extension cable should be as close as possible to the IR receiving window of the source device.
3) Point the remote control at the receiving head of the IR receiver extension cable to operate.

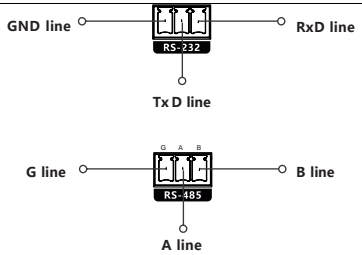
6. RS-232 Control

6.1 Baud rate

Different encoding mechanisms cannot be mixed, the baud rate of the RS-232/RS-485 port of this decoder is 2400, 4800, 9600, 19200, 38400, 57600, 115200.

6.2 Line order

Make sure the RS-232/RS-485 serial line is firmly connected and that the serial data line is connected correctly as follows:



If the RS-232/RS-485 serial does not work by following the above connection, please try to change the order of the TXD line and RXD line/A line and B line.

6.3 Set baud rate

The baud rate of the device's serial port can be viewed and modified through the control page in the app.

• Control App

The control app is called iMMS for ipcolor. Download the iOS app from the App Store or the Android app from the Google Play Store.

Note: we recommend using a tablet with a SOC Snapdragon 865 or above, 8GB or more of RAM, and a gigabit network to guarantee optimal experience.

For instructions on using the app interface, please refer to the Control App Interface document available in the Downloads section of the decoder product page on the DVDO website.

• FAQs

Q: Why is the status indicator off?
A: Please check whether all equipment is powered on and the networking cable is connected properly.

Q: Why is the output image unstable?
A: Check whether the length of the Ethernet cable is within the specified range, the length of HDMI cable is recommended to be ≤ 5 meters. Press the "reset" button to restart and reconnect.

• Technical Parameters

Video	
Input interface	1x RJ45
Output interface	1x HDMI
HDMI length	≤ 5m
Maximum transfer rate	18Gbps
Compatibility	HDMI 2.0
	HDCP 1.4/HDCP 2.2
Resolutions	4096x2160@24/30/50/60Hz, 3840x2160@24/30/50/60Hz, 1080P@50/60Hz, 720P@50/60Hz, 1920x1200@60Hz, 2560x1440@60Hz
Connection types	Regular switch Connection or Switch Cascade
Transmission distance	Cat6/6A/7≤120m
Transmission latency	180~250ms
Audio signal	
Input interface	1x RJ45
Output interface	1x 3.5mm L/R 1xHDMI
HDMI output	LPCM 2.0
3.5mm audio input/output format	LPCM 2.0
Command Signal	
Input interface	1x 3.5mm IR output 1x 3.5mm IR input
IR frequency	20kHz~60kHz
RS-232/RS-485	Default baud rate: 115200 Supported: 2400, 4800, 9600, 19200, 38400, 57600, 115200
I/O	Output control instructions

Power	
Power Supply	DC 5V/2A
Power Consumption	≤ 8W
Operating Environment	
Working temperature	-20℃~60℃
Storage temperature	-30℃~70℃
Humidity	0~90%RH (no condensation)
Physical Properties	
Housing	Metal
Dimensions	191.0(L)*96.0(W)*25.0(H)mm
Weight	518g
Color	Black
Protection	ESD protection 1a Contact discharge level 2 (±4KV) 1b Air discharge level 3 (±8KV) Implementation of the standard: IEC61000-4-2
	Lightning protection, Surge protection

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