



# 4K HDR HEVC: Live + Stored Out

1.5 RU Ultra High Definition digital video decoder or server with HDMI output and built-in scheduling. Can be used as a single channel live HEVC 4K Ultra HD video decoder or player or a 4 channel Full HD H.265 video player. Decodes and plays back directly from live or compressed video files with 10-bit color depth for High Dynamic Range content. Ingests HD or H.265 based 4K compressed video files on to its local SSD drive via Gigabit Ethernet or USB port. It can be configured for “looping” playback and so makes a perfect 4K video source for video walls, museums, digital signage, and 4K implementation. A set of easy to use web pages provides a versatile user interface via a web browser. Optional removable SSD.

## Features

- Outputs: 4K Ultra HD (2160p) or 4 independent channels of Full HD (up to 1080p) on HDMI
- Supports multiple output frame rates up to 60 fps
- File to IP – playlist play out with schedules
- 10 bit output precision supports high dynamic range 4K CEA HDR10 video decoding
- Supports upscaling to 3840 x 2160p
- Real time decode and play back from compressed video files
- Up to 16 channels of embedded PCM or pre-compressed audio output
- Supports Dolby Digital® and DTS passthrough
- Multi-viewer mode that combines 4 HD video as a single 4K Ultra HD output
- Supports live transport stream input
- Convenient web browser user interface with proxy video display for monitoring during playback
- Playlist with looping option for continuous playback of multiple hours of Full HD/ Ultra HD Video programs
- Includes playlist scheduler
- Vertical Ancillary Data output
- Test Pattern Generator built in
- Supports Closed Captioning
- Dual Ethernet port for content upload, input, or video server management



## Overview

HEVC/H.265 is the defacto standard for 4K content delivery. It evolved from MPEG-2 and H.264. It is a key component of future broadcast and OTT delivery platforms since it cuts the cost of bandwidth in half and provides greater storage density.

Due to its incredible clarity, Ultra High Definition is quickly gaining momentum in the entertainment industry. The Mavio™ 4K UHD Video playout server is the ideal solution which provides file based output with Ultra HDTV resolution. It is designed to store content in a compressed form, although playout is always uncompressed.

Content for UHDTV is not easy to find. Specialty "post houses" will provide you with UHDTV content. Netflix and YouTube also provide a source for 4K content. Output for UHD is delivered via the built-in HDMI 2.0 port.

## Applications

- Live 4K HDR decoder
- UHD Broadcast Video Playout Server  
With scalable storage, direct playback from mezzanine compressed 4K UHD video files, and playlist support, the Mavio is a cost-effective playout server for 4K Ultra HD broadcast services.
- R&D, Testing, and Demo Server  
Ideal for use as a 4K UHD video source in R&D, long term regression testing, or trade show demos of 4K UHD video processing or encoding equipment.
- HD Playout Server  
Can be used as a Full HD (up to 1080p60) video player with 4 independent channels, and 10-bit color depth to support High Dynamic Range content. The system provides a seamless transition path from HD to Ultra HD.
- Video walls
- Museums
- Digital signage
- Sports arenas and concert venues
- UHD Post Production



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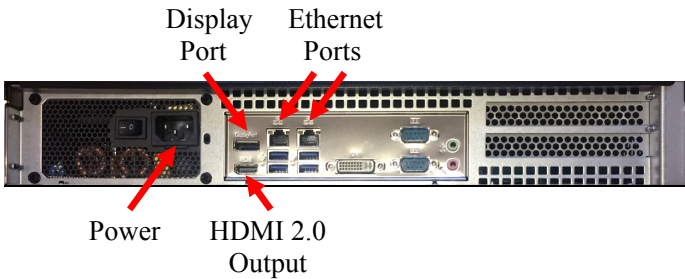
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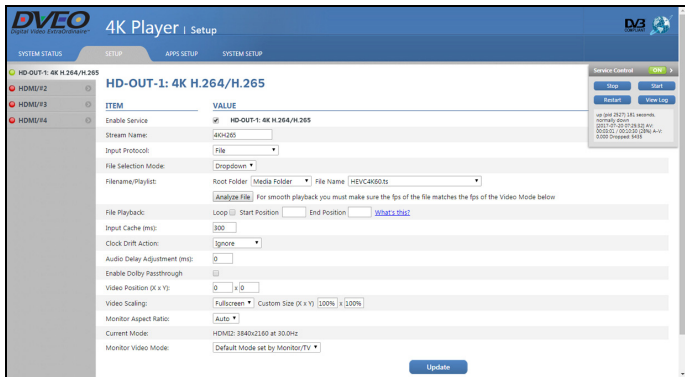
# Example Use Case



## Rear View



## Sample of GUIs



Output Setup



FTP Input Setup

## Ordering Information

Mavio 4K HDR HEVC: Live + Stored Out  
with one TByte SSD  
Additional SSD or HDD Removable  
Optional RAID

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# Product Comparison

	Mavio	Competitor
Maximum capacity (with 3 TB SSD drive, YUV422 10 bit output):	<b>More than 300 hours</b> (with 20 Mbps compressed files)	25 minutes
Real time decoding of compressed files:	Yes	No
Supports Uncompressed Video files (YUV and MXF):	No (Coming soon)	Yes
Playlist Scheduler:	Yes	No
Pre-compressed AC3 output on SDI:	Yes	No
VANC output on HDMI:	Yes	No
Logo insertion:	No	Yes

## Specifications

### Input/Ingest

One Gigabit Ethernet (HTTP, Web GUI) or USB port

### Outputs

Outputs:	HDMI 2.0
Resolution:	3840 x 2160, 1920 x 1080, 1280 x 720, etc.
Sample Format:	YUV422, 10-bit precision
Frame Rates:	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 fps
Audio:	16 channels embedded audio (24 bit 48 KHz PCM or SMPTE 337 pre-compressed audio)
VANC:	SMPTE 334-1

### File Formats

Containers:	MP4, TS, MPG, MOV, MKV, MXF (coming soon), WMV, VOB, M2TS
Video Codecs:	AVC (H.264), HEVC (H.265), MPEG2, MJPEG, ProRes422 compatible
Image Files	JPEG, BMP, PNG
Audio:	PCM, AC3, EAC3, Dolby-E, AAC, HEAAC, MPEG-1 Layer II
Bit rate:	Up to 1.8 Gbps
Storage:	SSD configurable from 1 TB to 16 TB

### Playback Time for UHD per TByte Storage

1.8 Gbps ProRes422HQ:	70 minutes per TByte
600 Mbps AVC Intra:	200 minutes per TByte
150 Mbps AVC long GOP:	800 minutes per TByte
50 Mbps AVC long GOP:	2400 minutes (40 hours) per TByte
20 Mbps HEVC long GOP:	6000 minutes (100 hours) per TByte

### Administration

Access:	Web interface and remote control
Remote Management:	HTTP RESTful API, IPMI

### CPU and Operating System

CPU:	Core i7 6700
OS:	Linux®

### Physical & Power

Size (1.5 RU):	2.7" h x 19" w x 9.8 d" (69 x 483 x 249 mm)
Power Supply:	600W single or 700W/750W
Voltage:	100 - 240V, 50-60 Hz
Operating Temperature:	5°C to 35°C (41°F to 95°F)
Non-Operating Temperature:	-40°C to 60°C (-40°F to 140°F)
Operating Relative Humidity:	8% to 90% non-condensing
Non-operating Relative Humidity:	5% to 95% non-condensing
Weight:	10 lbs (4.54 kg)
Conformities:	UL, CSA, CE, RoHS

### Security

Ports security scanned to MIL requirements prior to shipment

  
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