

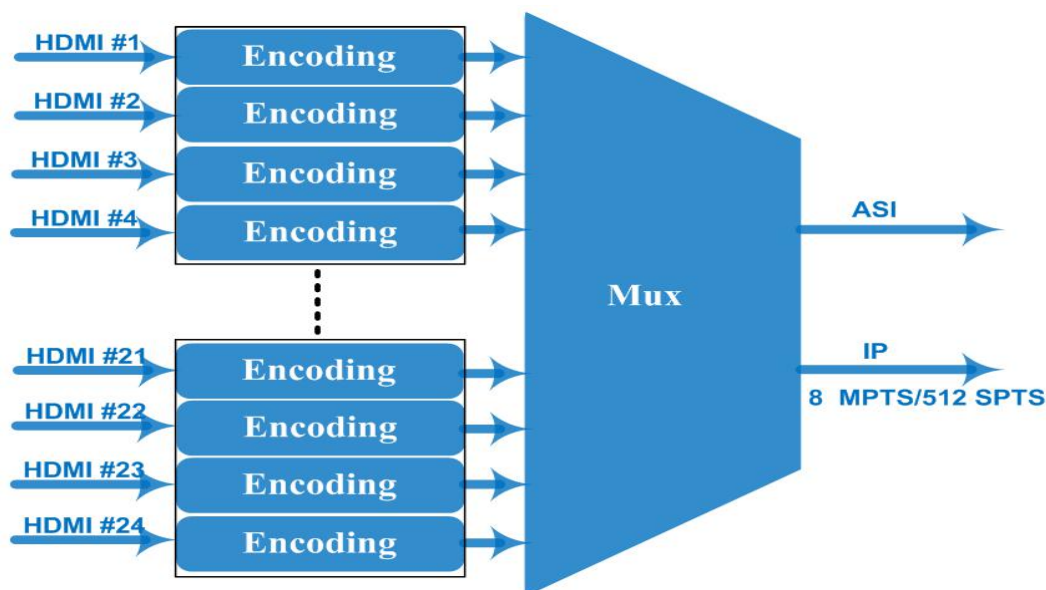
HP825H 24 in 1 H.265 HD Encoder



Product Overview

HP825H 24 in 1 H.265 HD/SD Encoder is Catcast's professional audio&video encoding and multiplexing device. This device has 24 HDMI input interfaces, It supports HEVC/H.265 and MPEG-4 AVC/H.264 Encoding,With B frame (IBBP) GOP structure and advanced compressing algorithm, this device enhances picture quality and provides ultra low bitrate to save 75% bandwidth compared with H.264/AVC and it supports up to 1080P@60Hz resolution. Moreover, this device can simultaneously encode 24 channels audio& video signals and can multiplex stream through ASI and IP port. In conclusion, its high performance and cost-effective design make this device widely used in CATV digital head-end, Satellite and terrestrial digital TV, Business application, IPTV/OTT system, etc.

Principle chart



Specifications

Input	8/12/16/20/24×HDMI(1.4) input for option, HDCP 1.4	
Video Encoding	Encoding Format	HEVC/ H.265, MPEG 4 AVC/H.264---HP825H-B
	Resolution	1920×1080_60P,1920×1080_59.94P,1920×1080_50P, 1280×720_60P, 1280×720_59.94P, 1280×720_50P
		Input: 1920×1080_60i,1920×1080_59.94i,1920×1080_50i Output:1920×1080_60P,1920×1080_59.94P,1920×1080_50P
	Chroma	4:2:0
	Bitrate (per channel)	0.5Mbps~20Mbps (HEVC/ H.265)
		4 Mbps~20Mbps (MPEG 4 AVC/H.264)
	Rate Control	CBR/VBR
GOP Structure	IBBP, IPPP	
Advanced Pretreatment	De-interlacing, Noise Reduction, Sharpening	
Audio Encoding	Encoding Format	MPEG-1 Layer 2, LC-AAC, HE-AAC, HE-AAC V2, AC3 Passthrough
	Sampling rate	48KHz
	Bit-rate (each channel)	48Kbps~384Kbps (MPEG-1 Layer 2 & LC-AAC)
		24 Kbps~128 Kbps (HE-AAC) 18 Kbps~56 Kbps (HE-AAC V2)
Audio Gain	0~255	
Stream output	8 MPTS and 512 SPTS output over UDP/RTP/RTSP 1000M/100M Base-T Ethernet interface (unicast/ multicast)	

	IP null packet filter	
System	Web based management	
	Chinese-English control interface	
	Ethernet software upgrade	
Miscellaneous	Dimension (W× L× H)	482mm×410mm×44mm
	Approx weight	8kg
	Temperature	0~45℃(work), -20~80℃ (Storage)
	Power	AC 100V-220V±10%, 50/60Hz

Catcast HEVC/H.265 encoder's advantages

1. Providing smooth TS for modulators

Catcast' HEVC/H.265 encoder adopts Fujitsu chip which offers stable bitrate with lower fluctuation compared with other encoding chips, so it provides smooth TS for modulators. It is widely used in variety of digital distribution systems such as CATV digital head-end, satellite and terrestrial digital TV, etc.

2. Encoding with highest compression format—B frame (IBBP)

What is B Frame?

There are 3 major picture types used in the different video algorithms, they are I, P and B.

They are different in the following characteristics:

I-frames are the least compressible but don't require other video frames to decode.

P-frames can use data from previous frames to decompress and are more compressible than I-frames.

B-frames can use both previous and forward frames for data reference to get the highest amount of data compression.

Frame Type	Byte of data/KB	Compression Ratio
I	18	7:1
P	6	20:1
B	2.5	50:1

In one word, B frame is the highest compression format which makes it possible to process HD video at low bit rate. HEVC/H.265 encoder is not able to save bandwidth unless it is with B frame. In encoder parameters, B frame is often described in GOP (Group of Pictures) structure, like “IBBP”.