

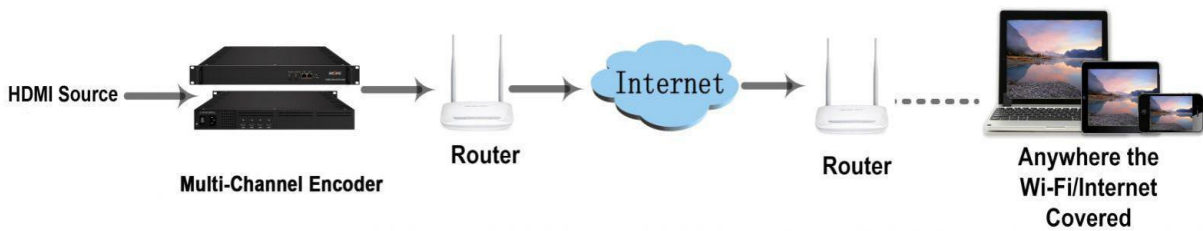


NDS3224V-N

HEVC/H.265 Network Encoder



Support IP out over UDP(SPTS) SRT/RTP/RTSP/RTMP/HTTP/HLS
Multiple HDMI inputs



OSD (Logo/QR Code) Insertion



Logo: support jpg/jpeg/bmp/gif/png file; drag to any position
QR Code: creat QR code quickly; add text/logo; custom size; drag to any position



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- ◆ **Ultra Low Bit Rate:** Save 75% Bandwidth
- ◆ **Enhance Picture Quality:** Advanced Compressing Algorithm
- ◆ **Advanced Pretreatment** De-interlacing, Noise Reduction, Sharpening



News Channel/Movies
1Mbps Full HD



Sports Channel
2Mbps Full HD



B frame(IBBP) GOP Structure



HDMI 1.4



Full HD 1080P



HDCP 1.4



Decoder/STB

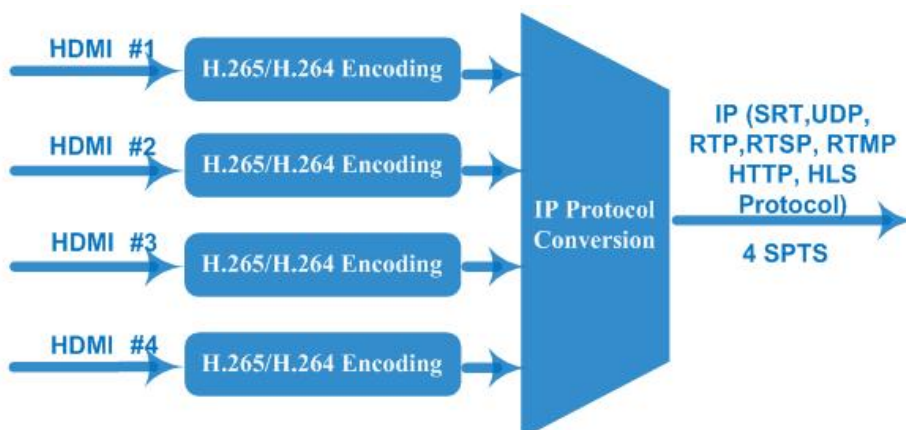
STB Available with Ensurity CAS
Decoding Chipset: **Montage CS8051/CS8021**



Up to 2160P 30Hz

Principle Chart of Per Module

(The number of encoding channels depends on encoding format and resolution)



Technical Specification

Input	4/8/12 HDMI inputs for option, HDCP 1.4			
Video Encoding	Encoding Format	HEVC/ H.265 , MPEG 4 AVC/H.264		
	Resolution	Input	Output	
			HEVC/H.265	MPEG-4 AVC/H.264
		4*1080P-50	4*1080P-50	2*1080P-50
		4*1080P-60	4*1080P-60,	2*1080P-60
		4*1080I-50	4*1080P-50	4*1080I-50 2*1080P-50
		4*1080I-60	4*1080P-60	4*1080I-60 2*1080P-60
		4*720P-50	4*720P-50	4*720P-50
	4*720P-60	4*720P-60	4*720P-60	
	Chroma	4:2:0		
Bitrate	0.5Mbps~20Mbps(each channel)			
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 Pass-through		
	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	IP (4 SPTS) output over SRT, RTP, RTSP, RTMP, HTTP, HLS per module, 1000M/100M Base-T Ethernet interface (unicast/multicast); IPv4, IPv6 output IP null packet filter			
System	Web based management			
	Chinese-English control interface			
	Ethernet software upgrade			
Miscellaneous	Dimension (W× L× H)	482mm×328mm×44mm		
	Approx weight	5kg		
	Temperature	0~45℃(work), -20~80℃ (Storage)		
	Power	AC 100V-220V±10%, 50/60Hz		

Dexin HEVC/H.265 encoder's advantages

1. Providing smooth TS for modulators

Dexin 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 bitrate. 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".